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AUTHOR Drake, Miriam A.
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ABSTRACT

A 1975 cost analysis study of the Purdue University Library and Audio-Visual Center collected data to ascertain the cost of services and materials during the fiscal year 1975 and to identify the allocation of costs among user groups, among library functions (e.g., processing, client services), and among end uses (e.g., instruction, research). This report describes the methodology used and states the results in the form of written analysis, circle graphs, and tables. (EMH)

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LIBRARIES AND AUDIO-VISUAL CENTER
COST ALLOCATION STUDY

RDU 76-02

Submitted to the Office of the Provost
Purdue University

By

Miriam A. Drake

Research Development Unit
Libraries and Audio-Visual Center
Purdue University
West Lafayette, IN 47907

May 1976

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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SUMMARY

The estimated cost of providing library and audio-visual services at the West Lafayette campus in 1974-75 was \$3.8 million. Services to the public were 7% of the total or \$275,000 while services to the Purdue community represented 93% of the costs.

The cost of services for the nine Schools were:

Agriculture	\$ 324,432
Engineering	446,953
Home Economics	283,718
Humanities, Social Sciences, and Education	1,281,392
Industrial Management	196,897
Pharmacy	58,885
Science	524,922
Technology	111,468
Veterinary Medicine	34,050

Services to administrative and non-teaching departments cost \$282,351.

These costs were based on a mixture of budgeted and actual expenditures and were distributed in proportion to the usage of services by each school.

BACKGROUND

The Libraries and Audio-Visual Center cost allocation study was undertaken primarily for the purpose of supplying input data for the Program Cost Study being conducted by Purdue University's Office of Analytical Studies (OAS). Prior to the initiation of the present study, two previous cost studies were examined to determine whether they could be used to fulfill the data needs of the Program Cost Study. The Quatman Study, which was completed in 1961, was undertaken " . . . to determine the average costs of providing library services and facilities to members of the university community engaged in research supported by organizations outside the university."⁽¹⁾ The results of the study provided the basis and methodology to determine the indirect library costs which could be charged to outside research contracts. Quatman's results were found to be inappropriate for the following reasons: 1) costs were not attributed to teaching departments; 2) student and faculty populations were tallied on different bases; 3) basic data was old; and 4) there was no rational weighting system use to determine research usage of library facilities.

The 1971 Library Cost Study was the second study examined.⁽²⁾ It was considered unsuitable to OAS's need because its focus was organizational rather than functional. In addition, the study did not attribute costs to user groups.

The study presented in this report was funded by the Office of the Provost and the Libraries and Audio-Visual Center.

Objectives

The objectives of the study were to:

- 1) Ascertain the costs of providing library and audio-visual services and materials to the Purdue West Lafayette campus for fiscal year 1975;
- 2) Allocate costs by user groups (e.g., undergraduate, faculty, etc.) and by academic department;
- 3) Allocate costs by library function (e.g., processing, client services, etc.); and
- 4) Allocate costs by end use (e.g., instruction, research, or public service).

The first and second objectives received the highest priority and closest attention. Objectives 3 and 4 have been completed to the extent that time and funds allowed.

In determining the costs of Library and Audio-Visual Center operations, the goal has been to obtain reasonably accurate data. It was not possible to determine all costs precisely; however, it is hoped that work in this area will continue and that refinements will be made in the data and collection methods.

Advisory Committee

Overall guidance for the study was provided by an Advisory Committee composed of the following persons: Frank Eikenberry, Head, Office of Analytical Studies, Ferdinand Leimkuhler, Professor of Industrial Engineering; Charles Lawrence, Professor of Cost Accounting; William

Corya, Head, Library Systems Development; Keith Dowden, Assistant Director, Reader Services; and Michael K. Buckland, Assistant Director, Technical Services. The committee met periodically with the study team to discuss methodological problems, review progress, and make suggestions. Each member of the Committee contributed ideas from different points of view. The Research Development Unit is grateful to Committee members for the time and effort they have contributed to this study.

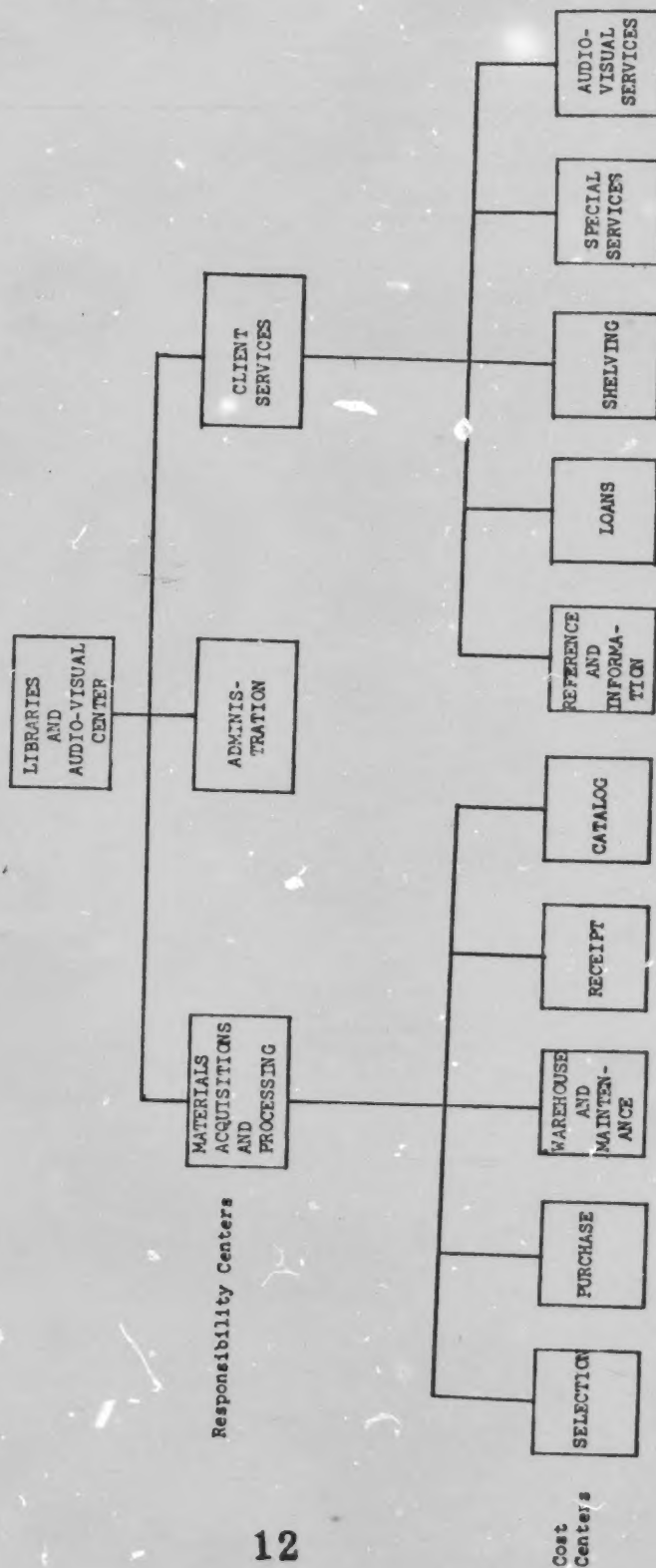
METHODOLOGY

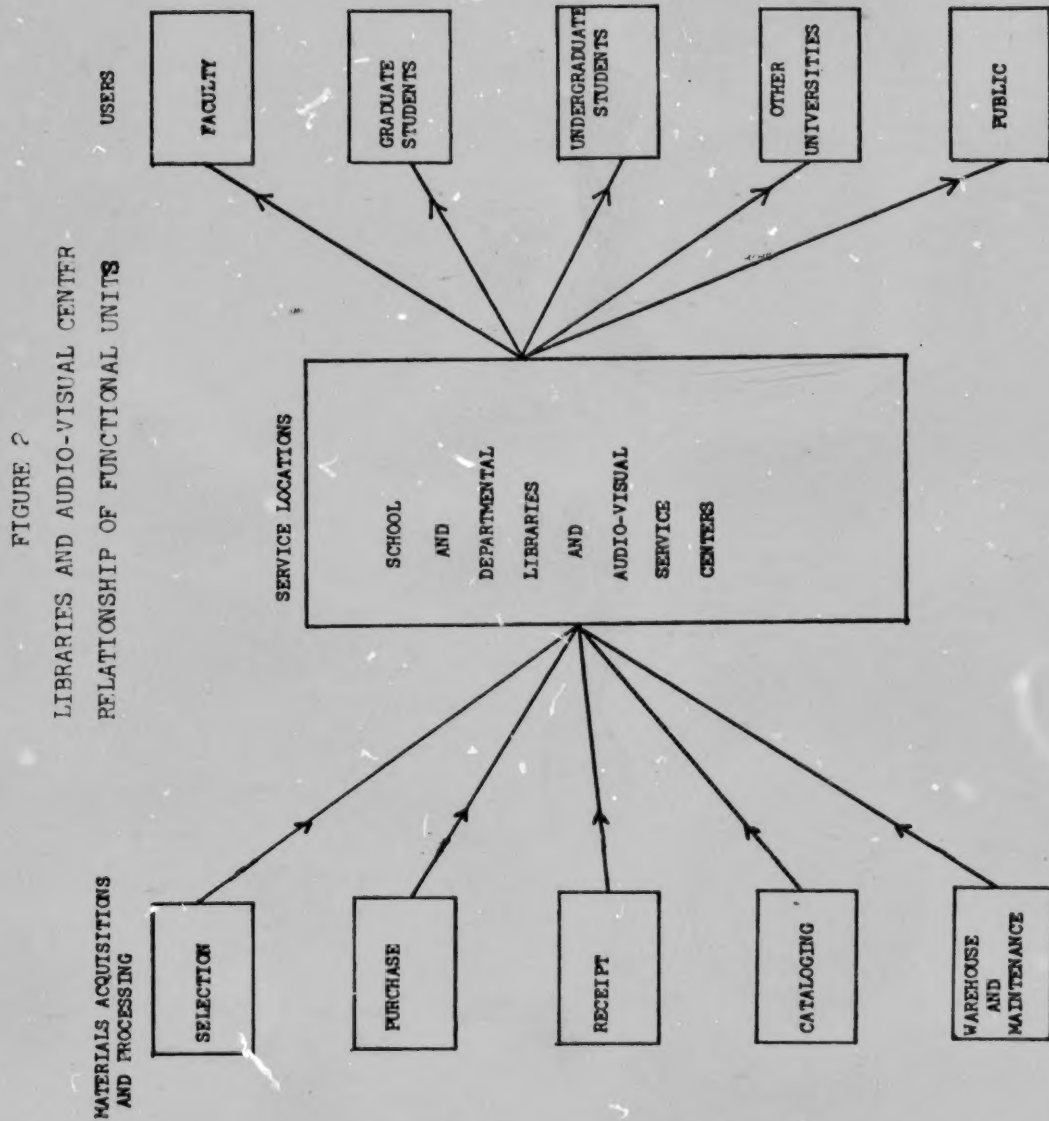
Cost accounting was the basic technique used to determine and analyze costs in this study. Standard cost accounting procedures, which were designed for profit-making institutions, were modified to accommodate accounting procedures used at Purdue. The works of Leimkuhler and Cooper⁽³⁾, Shillinglaw⁽⁴⁾, Gross⁽⁵⁾, and Anthony, Deardon and Vancil⁽⁶⁾, were used as general reference works in the field.

The framework for measuring costs in the Libraries and Audio-Visual Center was based on functional units rather than organizational structure. The system was divided into responsibility centers and cost centers. A responsibility center is defined as a functional unit consisting of a variety of activities with a broad objective. The Libraries and Audio-Visual Center consists of two responsibility centers: materials acquisitions and processing, and client services. A cost center is defined as a unit which is relatively homogeneous but is directed toward defined activity. Figure 1 illustrates the relationship of responsibility and cost centers. Client related activities, such as reference, circulation, etc., take place in defined units which are the school and departmental libraries and the audio-visual service centers. These units are referred to as service locations in this study. Figure 2 illustrates the relationship of functional activities and the service locations.

Data collection difficulties precluded analysis of costs by desired cost center. For the purposes of this study, the Libraries and Audio-Visual Center were considered separate units. Selection, purchase, and

FIGURE 1
LIBRARIES AND AUDIO-VISUAL CENTER
RESPONSIBILITY AND COST CENTERS





receipt of library materials were grouped into a single cost center for acquisitions with a second center for cataloging and related activities. Identification of separate warehouse and maintenance costs was not possible. Library client services and audio-visual services could not be broken down into cost centers. The illustrations (Figures 1 and 2) are included in this report to provide a model for future studies.

In measuring costs for each functional unit, both direct and indirect costs were determined. Direct costs, that is those costs which are incurred as part of a specific activity include; salaries and wages, fringe benefits, equipment, materials, assignable supplies and expense, space, and utilities. Indirect costs, common to two or more cost centers, include; administration, fiscal office, personnel office, systems development unit, research development unit, mail delivery, xerox, telephone, travel, unassignable supplies and expense, and miscellaneous. Indirect costs have been allocated on the basis of professional salaries and wages for each functional unit.

Sources of Data

Salaries, wages, fringe benefits, and other expenses were based on budgeted data as actual expense data is not readily available. Equipment, materials, and assignable supplies and expense were based on actual expenditures. Assignable supplies and expense includes; order forms used by the Acquisitions Department, catalog card stock, and keysort circulation forms used by the Krannert and General Libraries. Equipment and supplies given to the libraries by the teaching departments

were not included in this study. The cost for space, utilities, and maintenance is based on estimates supplied by Physical Plant. The floor space assigned to Libraries and Audio-Visual Center activities was determined through computer printouts provided by Schedules and Space.

Staff Activities

Libraries' staff working in service locations divide their time among a number of activities. In addition to the provision of direct client services, school and departmental librarians perform duties which are functionally related to materials acquisitions, such as book and serial selection, pre-order searching, order, and processing to make material readily available for users. In order to determine the proportion of salaries and wages that should be allocated to the various activities, professional staff were asked to estimate the time they and their support staff spend on specified activities. These proportions were applied to salaries, wages, and fringe benefits to determine the direct labor cost associated with the activities.

Library representatives and departmental library committee members, who are members of the teaching faculty, spend varying amounts of time on behalf of the library. The cost of their time was not included in this study because data concerning time spent were not readily available. Data contained in the Activity and Assignment Report issued by OAS were examined, but were found to be unsuitable because reporting of time spent on library committees by faculty members was incomplete, inconsistent, or not uniquely identified. For example, some departments

reported assignment of library committee members, other reported only the library representatives' time, while others reported no library activity. Time spent by library representatives and committee members represent a significant cost to the University and a substantial portion of materials selection cost. University administration costs also have been excluded from this study because data were not readily available.

Libraries Allocation Techniques

The primary objectives of this study were to determine the cost of providing library and audio-visual materials and services and to allocate these costs to user groups. There are three basic approaches to allocation:

- 1) intended use, which is based on the idea that materials and services are provided with the intent that they be used by specific groups;
- 2) actual use, which is based on the measured usage of materials and services by defined user groups; and
- 3) the indirect cost approach, which views library and audio-visual services as an indirect support function with costs to be allocated according to faculty salaries and wages.

The National Center for Higher Education Management Systems recommends that library costs be allocated to programs according to compensation " . . . adjusted by a faculty activity analysis," and audio-visual services be allocated according to actual usage. (7)

In this study, two allocations methods were applied to the cost data and compared. The first approach is a combination of actual use and intended use and is based on the idea that materials are purchased at the request of specific departments which intend to use them. Acquisitions and processing costs can be allocated on this intended use basis; however, it is not possible to allocate client services on this basis because they are offered to all groups. Client services, therefore, are allocated on an actual use basis.

The attribution of client service costs can be approached in two ways. The first method sums costs for all service locations and apportions the cost on the basis of actual usage of the whole system. The second method takes into account the variances in cost and usage among the different service locations. The cost of service provision in smaller libraries with one or two staff will not be the same as the operating cost of larger service locations with more staff. In addition, usage of each library location is not consistent among the teaching departments. Thus, it is necessary to divide the cost of service at each location according to the usage of that location and sum the usage cost for each department.

The second overall allocation method is based on actual usage of the total system. The underlying theory is that library services are offered to the total community and the groups which use the library should bear the burden in proportion to their actual usage of materials.

Usage Data

The allocation of costs according to actual usage necessitates having accurate data concerning library and audio-visual users. The most convenient library statistic to collect is recorded circulation. Librarians have raised two main objections to the use of this statistic as an indicator of usage:

- 1) in-house use and reserve book use are not taken into account; and
- 2) other services, such as reference are not segregated.

A study by McGrath at Louisiana State shows high positive correlation between the subjects of books used inside the library and books which are circulated outside. McGrath concluded " . . . that circulation totals, when grouped into self delineating spans, can be reliable indicators of the subjects being used within as well as out of the library." (8)

Densmore and Bourne⁽⁹⁾ in their cost study at Stanford indicated that over-the-counter circulation data appear to provide a good estimate of the use of library services.

Purdue does not collect data on the use of library services by user group; therefore, a special study of recorded circulation was undertaken to provide this data. A copy of the Circulation Study is appended to this report.

A similar study of Audio-Visual Center usage was undertaken for the period February 1 through April 30, 1975. The results of the study are presented in Appendix Tables A-1, A-2, and A-3 and indicate equipment and material checked out of the center and substations and material used within the center.

Research Vs. Instructional Uses

A lower priority objective of this study was to allocate costs by end use, i.e., instruction, research, and public service. The last category, public service, is easiest to estimate because the circulation study includes usage by persons outside Purdue through direct charges and interlibrary loans.

The Cost Study Advisory Committee discussed the problem of research and instructional uses of library and audio-visual services at length. There are no readily available or widely accepted methods of allocating library costs according to end use. The Advisory Committee considered and rejected three methods:

- 1) assign research usage according to time spent as indicated on the Activity and Assignment Report;
- 2) allocate research usage among graduate students and faculty according to the Payroll Report; and
- 3) survey library users.

The Activity and Assignment Report and Payroll Report methods were rejected because neither report accurately reflects the amount of research being done which requires use of the Libraries and Audio-Visual Center. A survey of library users was considered unsatisfactory because of the time and expense involved. In addition, the committee concluded that the results of such a survey would not be sufficiently accurate.

The allocation of costs according to end use is important for the following reasons:

- 1) the University needs to have reasonably accurate data in order to determine costs for its instructional programs;
- 2) the Office of Contract Administration, which is responsible for the Indirect Cost Study, needs data to determine the portion of cost which should be attributed to sponsored research and paid by the contracting agency; and
- 3) data on how library and audio-visual materials and services are used provide planning information for the Libraries and Audio-Visual Center Administration.

Time and funds available for this study precluded an in-depth examination of the issues involved in various end uses of the Libraries and Audio-Visual Center; therefore, it is recommended that these issues be studied further (see page 21).

Audio-Visual Costs

The Audio-Visual Center engages in a variety of activities in connection with the provision of services and material to its clientele. In addition to the selection, acquisition, processing, and loan of material, the center provides equipment which must be inspected and maintained and trained personnel who set up equipment configurations as well as operate the equipment.

Audio-Visual Center personnel were not asked to supply data regarding the distribution of hours spent performing their various jobs; therefore, it was not possible to gather cost data for specific functions. The total operating cost of the Audio-Visual Center was allocated to academic departments on the basis of usage data.

The direct and indirect cost items for the Audio-Visual Center are similar to those for the Libraries with the addition of depreciation for major equipment items, such as projectors, video tape playback units, tape cassette recorders, etc. Depreciation represents a major cost for the center because the equipment is essential to operations and has a limited life. Depreciation estimates were developed in a study undertaken by the Research Development Unit in 1975.⁽¹⁰⁾ Those estimates cover only major pieces of equipment and do not include films and other material which also have limited useful lives.

COST FINDINGS

The estimated cost of providing library and audio-visual services to the West Lafayette campus for 1974-75 was \$3.8 million. This sum includes both budgeted and actual expenditures. As indicated earlier, this figure does not include the cost of teaching faculty time spent on behalf of the Libraries, the cost of equipment or supplies provided by the teaching departments, or the cost of University Administration. A summary of major items included in the total cost is presented in Tables 1 and 2.

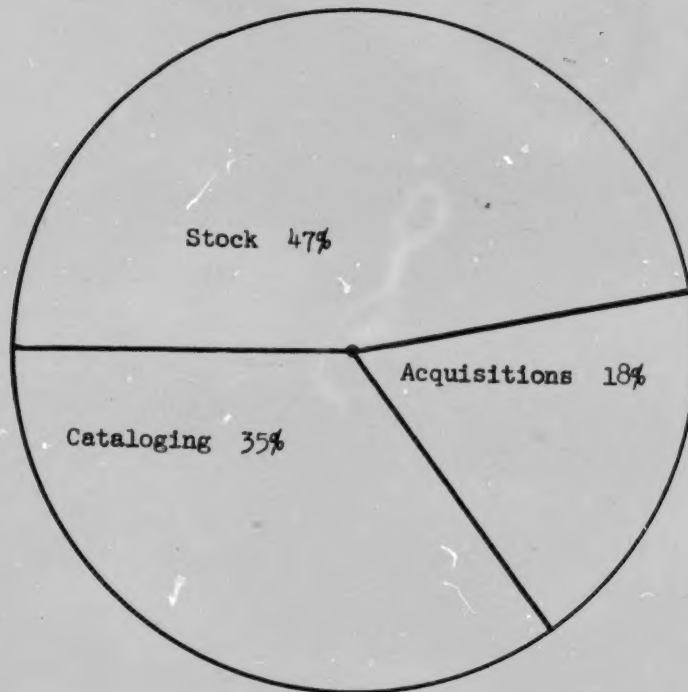
Details of libraries operating costs for fiscal year 1975 are presented in Appendix B. The cost of materials for the libraries was \$1,032,880 while the cost of selecting, ordering, and processing those materials was \$640,538. Processing costs represent 53% of the total cost of materials and processing books. Serials processing costs are substantially lower at 26% of the total serials cost. Percentage distributions for book and serials costs are showing in Figures 3 and 4. Direct services to users through school and departmental libraries cost \$1,660,854 in fiscal year 1975.

Cost Allocation

Allocation of costs to academic departments and classes of users is shown in Table 3. Approximately one-third of the cost of library and audio-visual services has been attributed to departments in the School of Humanities, Social Sciences, and Education. The Departments of Education and English, being the heaviest users of the system, have

Figure 3
Libraries/Audio-Visual Center
Percent Distribution of Books and Serials Cost by Function

BOOKS



SERIALS

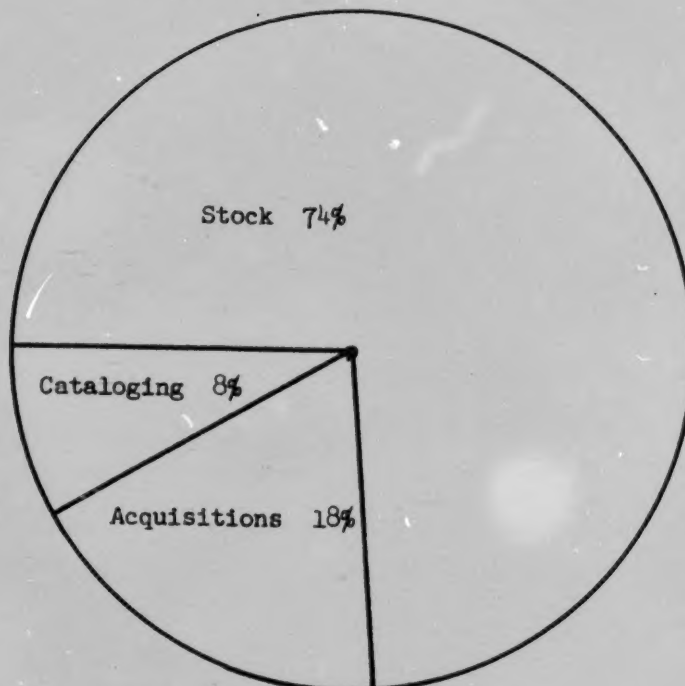
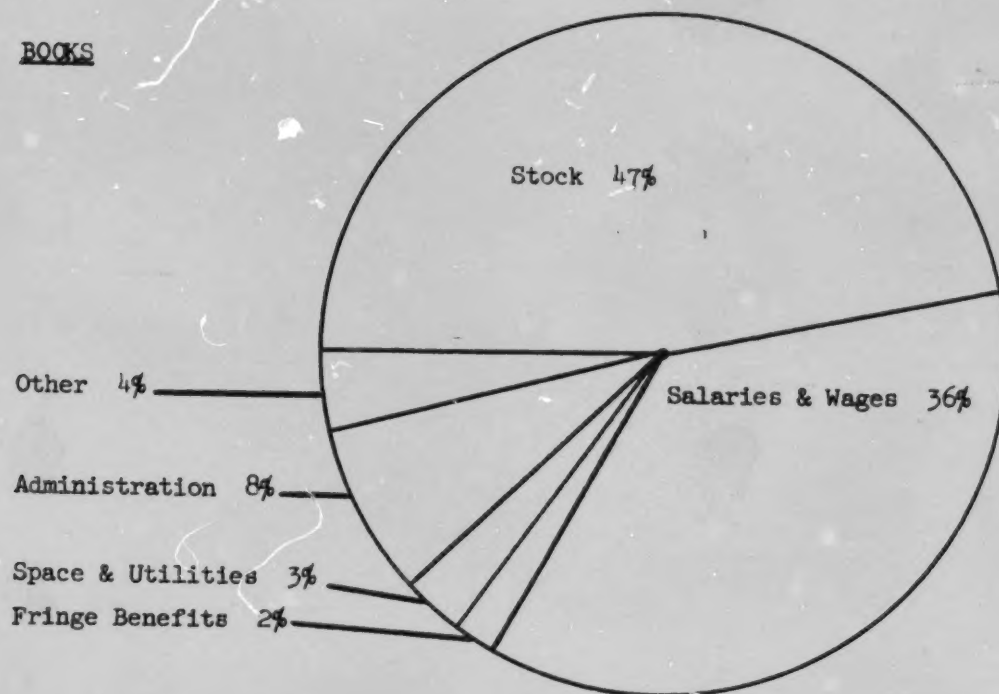
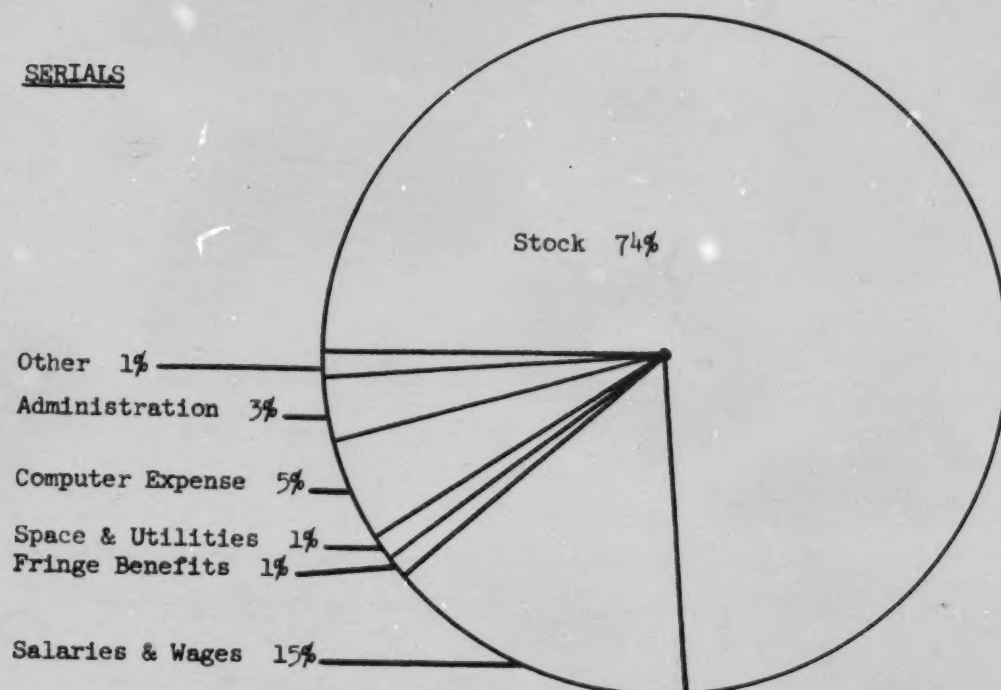


Figure 4
Libraries/Audio-Visual Center
Percent Distribution of Book and Serials Costs by Budget Component

BOOKS



SERIALS



been allocated the greatest proportion of the cost. Interlibrary loan and public service accounted for 7% of the cost.

The Instructional Program Cost Study relates instructional costs to population according to F.T.E. faculty and students. Table 4 shows a summary, by department, of Libraries and Audio-Visual Center costs per F.T.E. faculty and student. The highest per capita Libraries costs are incurred by graduate students in foreign languages and literature, history, and political science. Per capita costs range from \$.12 for undergraduates in statistics to \$1284.58 for graduate students in foreign languages and literature.

Because the allocation of library and audio-visual costs influences other cost studies being conducted by the University, it is useful to compare allocations which result from the application of different methods. Table 5 presents a cost allocation comparison based on usage, faculty F.T.E., and faculty salaries. The differences between allocations based on faculty F.T.E. and those based on faculty salaries range from 28% for the School of Technology to less than 1% for the School of Veterinary Medicine. A comparison of cost distribution based on usage with distribution based on faculty salaries produces significantly greater differences. For example, usage based cost for the School of Humanities, Social Sciences, and Education is 40% higher than cost based on salaries while the School of Agriculture's allocation is 93% greater if based on salaries rather than usage.

Cost allocation according to usage reflects the actual utilization of resources more accurately than indirect methods. Library and audio-

visual services are provided to the entire University community; however, the utilization of these services is not distributed equally among teaching departments and bears no direct relationship to the number of faculty and students in any department. In order for the University to have an accurate view of the resources utilized by academic departments, library and audio-visual services costs should be allocated on the basis of usage.

RECOMMENDATIONS

Depreciation of Audio-Visual Equipment and Materials

Audio-visual equipment and materials have limited useful lives due to wear and tear and obsolescence. The current study included an estimate of depreciation for major equipment items, but excluded costs associated with minor equipment, materials (e.g., films), and equipment which has been fully depreciated. The quality of service provided by the center is dependent upon equipment which operates efficiently and reliably and materials which are in good working order. The Center's program of inspection, maintenance, and repair has prolonged the useful life of equipment and materials resulting in cost savings for the University with small loss in the quality of service; however, as equipment ages through use, the cost of repair increases and becomes uneconomic. The standards of audio-visual service on the West Lafayette campus will suffer if equipment and materials are not replaced. It is recommended that an inventory be taken of films in the film library. The listing should include identification number, purchase date, replacement cost, number of uses, projected replacement date, and annual depreciation write-off. In addition, it is recommended that the University provide reserve funds for the periodic replacement of worn out equipment and films.

Depreciation of Library Materials

Most library materials lose value over time due to wear and tear from usage or obsolescence of content. Classic works and many out-of-

print works, however, appreciate in value over time. There have been many studies in the field of bibliometrics which provide a basis for determining loss of value due to obsolescence. As the value of physical space in libraries rises, it becomes increasingly important to weed obsolete or unused materials from library collections. In addition, library materials represent capital assets and should be adjusted in value over time. It is recommended that a study be undertaken to determine obsolescence patterns for major library collections, and to identify classic works, or out-of-print materials which are increasing in value. Procedures for weeding library collections should be developed. Also, storage facilities should be investigated.

Research Uses of the Libraries

As stated earlier, the study team was unable to produce a satisfactory methodology for the allocation of costs to research and instructional uses of the libraries. The primary difficulties with existing methods are the assumptions that: 1) library usage is in direct proportion to the time spent on research and instructional activities by faculty and graduate students; and 2) libraries services utilized for research by faculty and graduate students are equal to those utilized in instructional activities. Cost estimates based on the two assumptions could produce misleading results and overstate or understate the cost of providing library services to research and instructional programs.

The financial management section of the U. S. Department of Health, Education, and Welfare in its proposed revisions to Federal Management Circular 73-8 has stated that library resources and services are provided

primarily for the use of students and faculty with ". . . little or no services provided to Federally sponsored agreements . . .". Because library materials may be purchased with research funds, HEW is recommending that library services no longer be treated as an indirect cost. Their alternative is to treat library services as an "other institutional activity" or a special service facility. The cost of special service facilities, such as electronic computers, animal centers, and audio-visual centers are allowable provided that the amount charged, as a direct cost, to the project is based on actual usage of the services.⁽¹¹⁾ The implication of the proposed revision is that library costs incurred in the provision of service to sponsored research can be recovered; however, the cost must be in proportion to the actual usage of services.

At the present time, the Libraries and Audio-Visual Center is not prepared to provide data for the implementation of direct costing of library and audio-visual services. It is recommended that a pilot study be undertaken in cooperation with the Schools of Engineering to determine the actual usage of library and audio-visual facilities for research purposes by faculty and graduate students in Engineering and to develop a methodology for the direct costing of these services.

TABLE 1

LIBRARIES AND AUDIO-VISUAL CENTER

COST SUMMARY

1974-75

ITEM	LIBRARIES			AUDIO-VISUAL	TOTAL ⁽³⁾
	Processing	User Services	Total		
Salaries & Wages	\$ 422878	\$ 616963	\$1039841	\$ 249395	\$1289236
Fringe Benefits	27197	48390	75587	16140	91727
Space & Utilities	30639	671593	702232	55830	758062
Major Equipment	1169	1058	2227	36932	39159
Minor Equipment	----	----	----	6773	6773
Repair & Maintenance	----	----	----	8671	8671
Depreciation	----	----	----	10140 ⁽¹⁾	10140
Computer Expense	49752	-0-	49752	8697	58449
Supplies & Expense	3887	6162	10049	19165	29214
Subtotal	\$ 535522	1344166	\$1879688	\$ 411743	\$2291431
Materials Stock	----	----	1032880	15232	1048112
Administration	91182	240151	331333	43903	375236
Indirect	29180	76546	105726	----- ⁽²⁾	105726
TOTAL	<u>\$ 655884</u>	<u>\$1660863</u>	<u>\$3349627</u>	<u>\$ 470878</u>	<u>\$3820505</u>

(1) See discussion p. 14.

(2) Indirect expenses are allocated to libraries only as items covered in this category are included in Audio-Visual Center supplies and expense.

(3) This total includes both budgeted and actual expenditures.

TABLE 2

LIBRARIES AND AUDIO-VISUAL CENTER

INDIRECT COSTS

1974-75

Administration

Administrative Offices	\$ 157263
Fiscal Office	62964
Personnel Office	22005
Systems Development	42416
Research Development	48406
Library Delivery	42182
Total	\$ 375236

Other Costs Not Allocated Directly

Automotive	\$ 637
Printing & Office Supplies	23669
Travel	8147
Telephone	13580
Postage	12000
Consulting Fees	5139
Computer Services	9910
Rental Contracts	12457
Minor Equipment	315
Insurance	277
Repair and Maintenance	4019
Capital Equipment	15576
Total	\$ 105726

TABLE 3.1
LIBRARIES AND AUDIO-VISUAL CENTER
ALLOCATION OF COSTS TO ACADEMIC DEPARTMENTS
1974-75

SCHOOL/DEPARTMENT	LIBRARIES COST ALLOCATION (1)				AUDIO-VISUAL CENTER COST ALLOCATION				GRAND TOTAL
	Faculty	Graduate	Undergraduate	Total	Faculty	Students	Other	Total	
Agricultural Administration	\$ 590	\$ 1842	\$ 71260	\$ 73692	\$ 3063	\$ 5790	\$ -0-	\$ 8853	\$ 82545
Agricultural Economics	12336	22429	6770	41535	1557	1055	72	2684	44219
Agricultural Engineering	610	1970	2110	4690	941	942	-0-	1883	6573
Agromony	2701	17051	4365	24117	1270	1219	478	2967	27084
Animal Sciences	3024	6028	10711	19763	1083	1318	-0-	2401	22164
Biochemistry	4537	11353	5213	21103	1812	401	-0-	2213	23316
Botany & Plant Pathology	4376	9353	1679	15408	729	24	-0-	753	16161
Entomology	3137	4910	6021	14068	172	393	-0-	565	14633
Forestry & Natural Resources	4446	6457	42021	52924	1423	2109	-0-	3532	56456
Horticulture	2582	4587	20298	27467	2296	1518	-0-	3814	31281
Agriculture-Total	38339	85980	170448	294767	14346	14769	550	29665	324432
Engineering Administration	3645	40	-0-	3685	349	75	-0-	424	4109
Aeronautical & Astronautical Engineering	6218	18695	14948	39861	929	1331	-0-	2260	42121
Chemical Engineering	4427	23260	9829	37516	353	1060	-0-	1413	38929
Civil Engineering	9015	42197	26499	77711	975	1426	-0-	2401	80112
Electrical Engineering	11640	47230	24871	83741	382	4561	142	5085	88826
Freshman Engineering	371	-0-	40829	41200	93	2921	-0-	3014	44214
Industrial Engineering	2653	16094	10730	29477	950	1640	-0-	2590	32067
Interdisciplinary Engineering	154	62	15192	15408	119	1388	-0-	1507	16915
Materials Science Engineering	1417	4944	3688	10049	23	777	-0-	800	10849
Mechanical Engineering	8211	34156	26635	69002	1329	1519	119	2967	71969
Nuclear Engineering	1156	15592	-0-	16748	75	19	-0-	94	16842
Engineering-Total	48907	202270	173221	424398	5577	16717	261	22555	446953
Home Economics Administration	225	-0-	74607	75032	215	4682	-0-	4897	79929
Child Development & Family Life	1230	32936	-0-	34166	1523	643	-0-	2166	36332
Clothing & Textiles	1256	9094	39894	50244	612	518	-0-	1130	51374
Foods & Nutrition	2347	12550	33003	47900	674	1492	-0-	2166	50066
Home Management & Family Economics	770	6764	7874	15408	683	682	-0-	1365	16773
Housing, Equipment & Environmental Design	1368	7065	23389	31822	95	1883	-0-	1978	33800
Restaurant, Hotel & Institutional Management	383	4539	9816	14738	71	635	-0-	706	15444
Home Economics-Total	7579	72948	188783	269310	3873	10535	-0-	14408	283718

(1) Libraries cost allocation is based on usage. The data were derived by dividing total cost in proportion to usage of the system.

TABLE 3.2

LIBRARIES AND AUDIO-VISUAL CENTER
ALLOCATION OF COSTS TO ACADEMIC DEPARTMENTS
1974-75

SCHOOL/DEPARTMENT	LIBRARIES COST ALLOCATION (1)			AUDIO-VISUAL CENTER COST ALLOCATION					GRAND TOTAL
	Faculty	Graduate	Undergraduate	Total	Faculty	Students	Other	Total	
Humanities, Social Sciences & Education Administration	\$ 737	\$ -0-	\$ 36109	\$ 36846	\$ 309	\$ 2752	\$ -0-	\$ 3061	\$ 39907
American Studies	670	-0-	-0-	670	-0-	-0-	-0-	-0-	670
Audiology & Speech Sciences	4048	12563	21575	38186	687	5340	-0-	6027	44213
Communication	1996	34268	50491	86755	4298	7709	-0-	12007	98762
Creative Arts	8025	17375	57336	82736	2464	6530	-0-	8994	91730
Education	11619	104391	65540	181550	8600	19267	56	27923	209473
English	27688	91823	36917	156428	5411	5137	-0-	10548	166976
Foreign Language & Literature	22429	54723	26686	103838	1950	2782	24	4756	108594
General Studies	543	127	-0-	670	-0-	-0-	-0-	-0-	670
History	12524	30546	47035	90105	3246	3488	-0-	6734	96839
Philosophy	5979	9730	7738	23447	377	47	-0-	424	23871
Physical Education-Men	66	3973	28887	32866	715	2722	-0-	3437	36263
Physical Education-Women	506	1604	26027	28137	749	1087	-0-	1836	29973
Political Science	6118	48662	39344	94124	1448	5633	123	7204	101328
Psychological Sciences	8357	75487	53156	137000	6779	7540	43	14362	151362
Sociology & Anthropology	8291	31758	33978	74027	4242	2492	-0-	6734	80761
Humanities, Social Sciences & Education-Total	119596	516930	530819	1167345	41275	72526	246	114047	1281392
Industrial Management	12171	70778	104295	187244	848	8787	-0-	9635	196897
Pharmacy Administration	409	-0-	15334	15743	-0-	801	-0-	801	16544
Bionucleonics	1527	11202	-0-	12729	-0-	-0-	188	188	12917
Clinical Pharmacy	1509	1171	-0-	2680	-0-	47	-0-	47	2727
Industrial & Physical Pharmacy	770	5929	-0-	6699	-0-	94	-0-	94	6793
Medicinal Chemistry & Pharmacognosy	3216	7503	-0-	10719	94	-0-	-0-	94	10813
Pharmacology & Toxicology	2668	6376	-0-	9044	47	-0-	-0-	47	9091
Pharmacy-Total	10099	32181	15334	57614	141	942	188	1271	58885
Science Administration	-0-	-0-	25122	25122	96	1788	-0-	1884	27006
Biological Sciences	9546	41152	74613	125611	1070	12627	194	13891	139502
Chemistry	11907	62245	22652	96804	286	1833	-0-	2119	98923
Computer Science	3519	10668	20114	34501	550	2746	-0-	3296	37797
Geosciences	10717	19671	14832	45220	1965	2461	-0-	4426	49646
Mathematical Sciences	23475	30712	38598	92785	449	3671	71	4191	96976
Physics	7153	31558	15868	54599	1116	1992	-0-	3108	57707
Statistics	2477	14059	547	17083	51	231	-0-	282	17365
Science-Total	68794	210565	212366	491725	5583	27349	265	33197	524922

(1) Library cost allocation is based on usage. The data were derived by dividing total cost in proportion to usage of the system.

TABLE 3.3
LIBRARIES AND AUDIO-VISUAL CENTER
ALLOCATION OF COSTS TO ACADEMIC DEPARTMENTS
1974-75

SCHOOL/DEPARTMENT	LIBRARIES COST ALLOCATION (1)				AUDIO-VISUAL CENTER COST ALLOCATION				GRAND TOTAL
	Faculty	Graduate	Undergraduate	Total	Faculty	Students	Other	Total	
Technology Administration	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Aviation Technology	1077	-0-	15001	16078	2116	2357	-0-	4473	20551
Construction Technology	-0-	-0-	3685	3685	188	236	-0-	424	4109
Electrical Technology	131	-0-	7573	7704	564	660	-0-	1224	8928
Industrial Education	1307	13978	6488	21773	1051	739	-0-	1790	23563
Manufacturing Technology	707	-0-	10347	11054	1783	854	-0-	2637	13691
Nursing Technology	402	-0-	26395	26797	2610	3982	-0-	6592	33389
Supervision Technology	226	-0-	4798	5024	905	1308	-0-	2213	7237
Technology-Total	3850	13978	74287	92115	9217	10136	-0-	19353	111468
Veterinary Medicine Administration									
Anatomy	101	14302	-0-	14403	367	73	220	660	15063
Animal Clinics	2512	1507	-0-	4019	47	-0-	-0-	47	4066
Microbiology, Pathology & Public Health	1902	443	-0-	2345	188	-0-	-0-	188	2333
Physiology & Pharmacology	3915	6469	-0-	10384	188	-0-	-0-	188	10572
Veterinary Medicine-Total	1375	300	-0-	1675	141	-0-	-0-	141	1816
Other Purdue	9805	23021	-0-	32826	931	73	220	1224	34050
Interlibrary Loan & Public	---	---	---	80391	---	---	---	201960	282351
Total	---	---	---	251892	---	---	---	23544	275436
	---	---	---	3349627	---	---	---	470878	3820505

(1) Library cost allocation is based on usage. The data were derived by dividing total cost in proportion to usage of the system.

TABLE 4.1

LIBRARIES AND AUDIO-VISUAL CENTER
COST PER TEACHING FACULTY MEMBER, GRADUATE STUDENT,
AND UNDERGRADUATE BY DEPARTMENT⁽¹⁾

1974-75

SCHOOL/DEPARTMENT	LIBRARIES COST			AUDIO-VISUAL COST	
	Faculty	Graduate	Under-graduate	Faculty	Students
Agricultural Administration	\$357.14	\$113.70	\$ 42.53	\$1854.12	\$ 3.42
Agricultural Economics	564.55	215.46	26.75	71.25	2.95
Agricultural Engineering	29.47	69.37	15.04	45.46	5.58
Agronomy	71.05	163.01	31.72	33.41	5.03
Animal Sciences	100.55	74.79	29.84	36.01	2.99
Biochemistry	206.71	124.90	83.01	82.56	2.61
Botany & Plant Pathology	292.83	179.18	77.02	48.78	.32
Entomology	206.68	174.73	284.01	11.33	7.97
Forestry & Natural Resources	244.02	136.80	79.26	78.10	3.65
Horticulture	137.94	128.49	73.52	122.66	4.87
Engineering Administration	3645.00 ⁽²⁾	40.00 ⁽²⁾	-0-	349.00 ⁽²⁾	75.00 ⁽²⁾
Aeronautical & Astronautical Engineering	182.21	232.53	63.45	27.22	4.21
Chemical Engineering	153.44	298.21	39.40	12.24	3.24
Civil Engineering	70.97	178.05	50.24	7.68	1.87
Electrical Engineering	93.32	196.30	39.94	3.06	5.28
Freshman Engineering	45.23	-0-	24.08	11.34	1.72
Industrial Engineering	73.59	233.92	43.05	26.35	5.17
Interdisciplinary Engineering	154.00 ⁽²⁾	310.00	52.24	119.00	4.77
Materials Science Engineering	131.23	205.15	88.44	2.13	11.81
Mechanical Engineering	90.85	164.93	42.20	14.71	1.81
Nuclear Engineering	74.45	339.70	-0-	4.83	.41
Home Economics Administration	278.47	-0-	117.06	266.09	7.33
Child Development & Family Life	42.92	465.20	-0-	53.14	3.96
Clothing & Textiles	65.73	404.18	123.59	32.03	1.50
Foods & Nutrition	108.39	285.23	111.91	31.13	4.41
Home Management & Family Economics	88.23	281.83	122.46	78.26	7.72
Housing, Equipment & Environmental Design	103.26	477.37	111.54	7.17	8.39
Restaurant, Hotel & Institutional Management	36.37	357.40	59.13	6.74	3.55

(1) F.T.E. teaching faculty and students were provided by the Office of Analytical Studies. Per capita costs were derived by dividing costs for each group (as shown in Table 3) by the appropriate F.T.E. population.

(2) No faculty or students listed.

TABLE 4.2

LIBRARIES AND AUDIO-VISUAL CENTER
COST PER TEACHING FACULTY MEMBER, GRADUATE STUDENT,
AND UNDERGRADUATE BY DEPARTMENT⁽¹⁾

1974-75

SCHOOL/DEPARTMENT	LIBRARIES COST			AUDIO-VISUAL COST	
	Faculty	Graduate	Under-graduate	Faculty	Students
Humanities, Social Sciences, & Education Administration	\$737.00 ⁽²⁾	\$ -0-	\$ 78.38	\$309.00 ⁽²⁾	\$ 5.97
American Studies	670.00 ⁽²⁾	-0-	-0-	-0-	-0-
Audiology & Speech Sciences	68.37	128.19	60.59	11.60	11.76
Communication	19.17	459.36	129.73	41.29	16.62
Creative Arts	89.14	353.87	140.53	27.37	14.29
Education	74.96	166.20	87.34	55.48	13.98
English	120.15	705.25	178.69	23.48	15.25
Foreign Language & Literature	172.32	1284.58 ⁽²⁾	156.15	14.98	13.03
General Studies	72.80	127.00	-0-	-0-	-0-
History	301.68	1075.56	196.80	78.19	13.04
Philosophy	242.63	364.42	354.95	15.30	.97
Physical Education-Men	1.80	79.04	68.62	19.51	5.79
Physical Education-Women	15.74	229.14	168.57	23.30	7.57
Political Science	145.48	1001.28	141.58	34.43	17.25
Psychological Sciences	73.42	374.81	126.50	59.55	12.13
Sociology & Anthropology	154.26	527.54	150.61	78.93	8.72
Industrial Management	79.05	155.25	43.00	5.51	3.05
Pharmacy Administration	409.00 ⁽²⁾	-0-	21.21	-0-	1.11
Bionucleonics	76.73	169.22	-0-	-0-	-0-
Clinical Pharmacy	48.69	86.74	-0-	-0-	3.48
Industrial & Physical Pharmacy	55.25	137.56	-0-	-0-	2.18
Medicinal Chemistry & Pharmacognosy	205.33	252.63	-0-	6.00	-0-
Pharmacology & Toxicology	240.12	193.21	-0-	4.23	-0-

(1) F.T.E. teaching faculty and students were provided by the Office of Analytical Studies. Per capita costs were derived by dividing costs for each group (as shown in Table 3) by the appropriate F.T.E. population.

(2) No faculty or students listed.

TABLE 4.3

LIBRARIES AND AUDIO-VISUAL CENTER
COST PER TEACHING FACULTY MEMBER, GRADUATE STUDENT,
AND UNDERGRADUATE BY DEPARTMENT⁽¹⁾

1974-75

SCHOOL/DEPARTMENT	LIBRARIES COST			AUDIO-VISUAL COST	
	Faculty	Graduate	Under-graduate	Faculty	Students
Science Administration	\$ -0-	\$ -0-	\$ 51.53	\$ 18.90	\$ 3.67
Biological Sciences	56.87	229.78	60.61	6.37	8.95
Chemistry	51.51	188.17	86.62	1.24	3.10
Computer Science	68.03	98.62	58.92	10.63	6.08
Geosciences	275.08	280.21	86.08	50.44	10.15
Mathematical Sciences	104.18	262.05	75.85	1.99	1.16
Physics	55.57	188.18	116.14	8.67	6.54
Statistics	5.74	281.18	37.99	.12	3.59
Technology Administration	-0-	-0-	-0-	-0-	-0-
Aviation Technology	23.89	-0-	54.21	46.94	8.52
Construction Technology	-0-	-0-	17.33	21.17	1.11
Electrical Technology	6.35	-0-	24.85	27.32	2.17
Industrial Education	87.36	411.12	67.30	70.25	5.67
Manufacturing Technology	33.47	-0-	35.87	84.41	2.96
Nursing Technology	11.07	-0-	68.01	71.88	10.26
Supervision Technology	27.12	-0-	25.28	108.60	6.89
Veterinary Medicine					
Administration	28.65	48.61	-0-	104.11	.25
Anatomy	183.11	167.44	-0-	3.43	-0-
Animal Clinics	40.90	340.77	-0-	4.04	-0-
Microbiology, Pathology & Public Health	219.75	183.78	-0-	10.55	-0-
Physiology & Pharmacology	125.37	49.18	-0-	12.86	-0-
Unallocated --					
Other Purdue	\$284081				
Outside Purdue	\$275463				

(1) F.T.E. teaching faculty and students were provided by the Office of Analytical Studies. Per capita costs were derived by dividing costs for each group (as shown in Table 3) by the appropriate F.T.E. population.

TABLE 5.1

LIBRARIES AND AUDIO-VISUAL CENTER
COMPARATIVE COST ALLOCATION BY DEPARTMENT

SCHOOL/DEPARTMENT	USAGE	ALLOCATIONS ACCORDING TO	
		FACULTY FTE	FACULTY SALARIES
Agricultural Administration	82545	16810	23305
Agricultural Economics	44219	64949	62656
Agricultural Engineering	6573	43172	44700
Agronomy	27084	113851	112323
Animal Sciences	22164	102390	100097
Biochemistry	23316	76410	57308
Botany & Plant Pathology	16161	68005	60364
Entomology	14633	55015	48903
Forestry & Natural Resources	56456	61510	58836
Horticulture	31281	64566	56543
Agriculture-Total	324432	666678	625035
Engineering Administration	4109	22541	30564
Aeronautical & Astronautical Engineering	42121	60364	68769
Chemical Engineering	38929	45846	52723
Civil Engineering	80112	152820	168484
Electrical Engineering	88826	126459	138302
Freshman Engineering	44214	24451	23687
Industrial Engineering	32067	46228	55015
Interdisciplinary Engineering	16915	3439	5349
Materials Science Engineering	10849	26361	29800
Mechanical Engineering	71969	126459	142123
Nuclear Engineering	16842	19867	25979
Engineering-Total	446953	654835	740795
Home Economics Administration	79929	10315	10315
Child Development & Family Life	36332	30564	26744
Clothing & Textiles	51374	19867	16810
Foods & Nutrition	50066	19867	17192
Home Management & Family Economics	16773	10697	10315
Housing, Equipment & Environmental Design	33800	13754	11080
Restaurant, Hotel & Institutional Management	15444	11461	9933
Home Economics-Total	283718	116525	102389

TABLE 5.2

LIBRARIES AND AUDIO-VISUAL CENTER
COMPARATIVE COST ALLOCATION BY DEPARTMENT

<u>SCHOOL/DEPARTMENT</u>	<u>USAGE</u>	ALLOCATIONS ACCORDING TO	
		<u>FACULTY FTE</u>	<u>FACULTY SALARIES</u>
Humanities, Social Sciences & Education Administration	39907	15282	18338
American Studies	670		
Audiology & Speech Sciences	44213	57308	50049
Communication	98762	56161	53488
Creative Arts	91730	84433	71443
Education	209473	143651	134864
English	166976	131425	120728
Foreign Language & Literature	108594	92838	84051
General Studies	670	----	----
History	96839	59218	57309
Philosophy	23871	34385	32856
Physical Education-Men	36263	32092	29418
Physical Education-Women	29973	31710	24451
Political Science	101328	45082	47374
Psychological Sciences	151362	109649	123020
Sociology & Anthropology	80761	67241	68005
Humanities, Social Sciences & Education-Total	1281392	960475	915394
Industrial Management	196897	141360	162754
Pharmacy Administration	16544	5731	9551
Bionucleonics	12917	23305	24069
Clinical Pharmacy	2727	29800	28272
Industrial & Physical Pharmacy	6793	20631	21013
Medicinal Chemistry & Pharmacognosy	10813	45464	34002
Pharmacology & Toxicology	9091	19866	20249
Pharmacy-Total	58885	144797	137156
Science Administration	27006	6113	6113
Biological Sciences	139502	158169	165046
Chemistry	98923	183384	167338
Computer Science	37797	41261	44318
Geosciences	49646	51959	51195
Mathematical Sciences	96976	155877	189879
Physics	57707	165046	179946
Statistics	17365	34002	39351
Science-Total	524922	795811	843186

TABLE 5.3

LIBRARIES AND AUDIO-VISUAL CENTER
COMPARATIVE COST ALLOCATION BY DEPARTMENT

<u>SCHOOL/DEPARTMENT</u>	<u>USAGE</u>	<u>ALLOCATION ACCORDING TO</u>	
		<u>FACULTY FTE</u>	<u>FACULTY SALARIES</u>
Technology Administration	-0-	9169	10697
Aviation Technology	20551	51959	34003
Construction Technology	4109	6113	4966
Electrical Technology	8928	25597	21777
Industrial Education	23563	23687	22541
Manufacturing Technology	13691	28272	24451
Nursing Technology	33389	53105	34002
Supervision Technology	7237	10697	10697
Technology-Total	111468	208599	163134
Veterinary Medicine-Administration	15063	12990	16046
Anatomy	4066	17574	18721
Animal Clinics	2533	62656	53105
Microbiology, Pathology & Public Health	10572	24451	28272
Physiology & Pharmacology	1816	13754	14518
Veterinary Medicine-Total	34050	131425	130662
Other Purdue	282351	----	----
Interlibrary Loan & Public	275436	----	----
Total	3820505	3820505	3820505

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APPENDIX A

AUDIO-VISUAL CENTER USAGE

The tables which follow present summary usage data for the Audio-Visual Center for the period February 1 through April 30, 1975. Table A-1 is a summary of the use of equipment and materials by students, faculty, and others in each teaching department. In-House usage, that is, use within preview rooms located in the Stewart Center is shown in Table A-2. Loans of equipment and material from the Stewart Center and sub-centers are presented in Table A-3.

TABLE A-1.1
AUDIO-VISUAL CENTER LOANS
CHECK OUTS BY DEPARTMENT
FEBRUARY 1-APRIL 30, 1975

SCHOOL/DEPARTMENT	EQUIPMENT				MATERIALS (1)					
	Faculty	Staff	Students	Other	Total	Faculty	Staff	Students	Other	Total
Agricultural Administration	87	-0-	22	-0-	109	34	-0-	32	-0-	66
Agricultural Economics	53	-0-	11	-0-	64	8	-0-	1	-0-	9
Agricultural Engineering	34	-0-	8	-0-	42	4	-0-	1	-0-	5
Agronomy	29	-0-	1	4	34	16	-0-	-0-	-0-	16
Animal Sciences	20	-0-	10	-0-	30	20	-0-	1	-0-	21
Biochemistry	31	-0-	1	-0-	32	17	-0-	-0-	-0-	17
Botany & Plant Pathology	6	-0-	1	-0-	7	18	-0-	-0-	-0-	18
Entomology	4	-0-	12	-0-	16	3	-0-	-0-	-0-	3
Forestry & Natural Resources	19	-0-	14	-0-	33	37	-0-	8	-0-	45
Horticulture	15	-0-	6	-0-	21	43	-0-	2	-0-	45
Agriculture-Total	298	-0-	86	4	388	200	-0-	45	-0-	245
Engineering Administration & Experiment Stations	4	-0-	-0-	-0-	4	10	-0-	-0-	-0-	10
Aeronautical & Astronautical Engineering	23	-0-	20	-0-	43	9	-0-	8	-0-	17
Chemical Engineering	6	-0-	16	-0-	22	7	-0-	10	-0-	17
Civil Engineering	21	1	18	-0-	40	17	-0-	-0-	-0-	17
Electrical Engineering	6	-0-	75	6	87	7	-0-	15	-0-	22
Freshman Engineering	1	-0-	17	-0-	18	-0-	-0-	14	-0-	14
Industrial Engineering	19	-0-	21	-0-	40	21	-0-	8	-0-	29
Interdisciplinary Engineering	-0-	-0-	16	-0-	16	5	-0-	2	-0-	7
Materials Science Engineering	1	-0-	14	-0-	15	-0-	-0-	5	-0-	5
Mechanical Engineering	21	-0-	34	3	58	24	-0-	7	-0-	31
Nuclear Engineering	4	-0-	-0-	-0-	4	-0-	-0-	-0-	-0-	-0-
Engineering-Total	106	1	231	9	347	100	-0-	69	-0-	169
Home Economics Administration	8	-0-	28	-0-	36	-0-	-0-	23	-0-	23
Child Development & Family Life	9	-0-	2	-0-	11	53	-0-	3	-0-	56
Clothing & Textiles	7	-0-	8	-0-	15	16	-0-	1	-0-	17
Foods & Nutrition	1	-0-	1	-0-	2	18	-0-	4	-0-	22
Home Management & Family Economics	8	-0-	3	-0-	11	17	-0-	6	-0-	23
Housing, Equipment & Environmental Design	2	-0-	3	-0-	5	2	-0-	24	-0-	26
Restaurant, Hotel & Institutional Management	-0-	-0-	4	-0-	4	3	-0-	-0-	-0-	3
Home Economics-Total	35	-0-	49	-0-	84	109	-0-	61	-0-	170

(1) Includes films, media kits, slides and film strips.

TABLE A-1.2
AUDIO-VISUAL CENTER LOANS
CHECK OUTS BY DEPARTMENT
FEBRUARY 1-APRIL 30, 1975

SCHOOL/DEPARTMENT	EQUIPMENT				Total	MATERIALS (1)				Total
	Faculty	Staff	Students	Other		Faculty	Staff	Students	Other	
Humanities, Social Sciences, & Education Administration	8	-0-	4	-0-	12	1	-0-	4	-0-	5
American Studies	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Audiology & Speech Sciences	6	-0-	13	-0-	19	18	-0-	14	-0-	32
Communication	25	-0-	30	-0-	55	77	-0-	25	-0-	102
Creative Arts	25	-0-	40	-0-	65	65	-0-	21	-0-	86
Education	154	-0-	53	1	208	147	-0-	87	-0-	234
English	24	-0-	6	-0-	30	157	-0-	22	-0-	179
Foreign Language & Literature	12	-0-	4	1	17	25	-0-	5	-0-	30
General Studies	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
History	63	-0-	13	-0-	76	53	-0-	34	-0-	87
Philosophy	9	-0-	1	-0-	10	7	-0-	1	-0-	8
Physical Education-Men	4	-0-	32	-0-	36	21	-0-	17	-0-	38
Physical Education-Women	13	-0-	3	-0-	16	13	-0-	2	-0-	15
Political Science	8	-0-	38	-0-	46	36	-0-	19	-0-	55
Psychological Sciences	58	-0-	34	1	93	135	-0-	32	-0-	167
Sociology & Anthropology	34	-0-	15	-0-	49	99	-0-	11	-0-	110
Humanities, Social Sciences & Education-Total	443	-0-	286	3	732	854	-0-	294	-0-	1148
Industrial Management	4	-0-	64	-0-	68	24	-0-	11	-0-	35
Pharmacy Administration	-0-	-0-	14	-0-	14	-0-	-0-	-0-	-0-	-0-
Bionucleonics	-0-	-0-	8	-0-	8	-0-	-0-	-0-	-0-	-0-
Clinical Pharmacy	1	-0-	-0-	-0-	1	-0-	-0-	-0-	-0-	-0-
Industrial & Physical Pharmacy	-0-	-0-	2	-0-	2	-0-	-0-	-0-	-0-	-0-
Medical Chemistry & Pharmacognosy	1	-0-	-0-	-0-	1	2	-0-	-0-	-0-	2
Pharmacology & Toxicology	-0-	-0-	-0-	-0-	-0-	1	-0-	-0-	-0-	1
Pharmacy-Total	2	-0-	24	-0-	26	3	-0-	-0-	-0-	3
Science Administration	2	-0-	6	-0-	8	-0-	-0-	3	-0-	3
Biological Sciences	12	-0-	40	-0-	52	17	-0-	36	-0-	53
Chemistry	6	-0-	20	-0-	26	2	-0-	12	-0-	14
Computer Science	5	-0-	11	-0-	16	13	-0-	4	-0-	17
Geosciences	3	-0-	5	-0-	8	68	-0-	13	-0-	81
Mathematical Sciences	6	-0-	13	3	22	11	-0-	1	-0-	12
Physics	10	-0-	27	-0-	37	36	-0-	8	-0-	44
Statistics	-0-	-0-	-0-	-0-	-0-	1	-0-	3	-0-	4
Science-Total	44	-0-	122	3	169	148	-0-	80	-0-	228

(1) Includes films, media kits, slides and film strips.

TABLE A-1.3

AUDIO-VISUAL CENTER LOANS
CHECK OUTS BY DEPARTMENT
FEBRUARY 1-APRIL 30, 1975

SCHOOL/DEPARTMENT	EQUIPMENT					MATERIALS (1)				
	Faculty	Staff	Students	Other	Total	Faculty	Staff	Students	Other	Total
Technology Administration	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Aviation Technology	6	-0-	3	-0-	9	83	-0-	8	-0-	91
Construction Technology	-0-	-0-	2	-0-	2	6	-0-	3	-0-	9
Electrical Technology	2	-0-	7	-0-	9	15	-0-	3	-0-	18
Industrial Education	6	-0-	6	-0-	12	26	-0-	15	-0-	41
Manufacturing Technology	9	-0-	23	-0-	32	65	-0-	2	-0-	67
Nursing Technology	12	-0-	11	-0-	23	57	-0-	-0-	-0-	57
Supervision Technology	22	-0-	9	-0-	31	9	-0-	13	-0-	22
Technology-Total	57	-0-	61	-0-	118	261	-0-	44	-0-	305
Veterinary Medicine Administration	9	-0-	-0-	-0-	9	-0-	-0-	-0-	-0-	-0-
Anatomy	-0-	-0-	-0-	-0-	-0-	2	-0-	-0-	-0-	2
Animal Clinics	-0-	-0-	-0-	-0-	-0-	9	-0-	-0-	-0-	9
Microbiology, Pathology & Public Health	-0-	-0-	-0-	-0-	-0-	7	-0-	-0-	-0-	7
Physiology & Pharmacology	-0-	-0-	-0-	-0-	-0-	6	-0-	-0-	-0-	6
Veterinary Medicine-Total	9	-0-	-0-	-0-	9	24	-0-	-0-	-0-	24
Other Departments (2)	644	41	410	1079	2174	170	416	242	945	1773
Total Loans	1642	42	1333	1098	4115	1893	416	846	945	4100

(1) Includes films, media kits, slides and film strips.

(2) Includes Audio-Visual Production, Agricultural Extension Agents, Graduate School Administration, Library Administration, Audio-Visual Center, Business Offices, etc.

TABLE A-1.4
AUDIO-VISUAL CENTER LOANS
CHECK OUTS BY DEPARTMENT
FEBRUARY 1-APRIL 30, 1975

SCHOOL/DEPARTMENT	VIDEO EQUIPMENT TAPE AND TAPE CASSETTES				LOANS FROM SUBSTATIONS ⁽³⁾					
	Faculty	Staff	Students	Other	Total	Faculty	Staff	Students	Other	Total
Agricultural Administration	8	-0-	2	-0-	10	-0-	-0-	1	-0-	1
Agricultural Economics	-0-	-0-	-0-	-0-	-0-	3	-0-	-0-	-0-	3
Agricultural Engineering	2	-0-	-0-	-0-	2	-0-	-0-	-0-	-0-	-0-
Agronomy	4	-0-	-0-	-0-	4	4	-0-	-0-	-0-	4
Animal Sciences	3	-0-	-0-	-0-	3	3	-0-	-0-	-0-	3
Biochemistry	23	-0-	4	-0-	27	3	-0-	-0-	-0-	3
Botany & Plant Pathology	-0-	-0-	-0-	-0-	-0-	6	-0-	-0-	-0-	6
Entomology	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Forestry & Natural Resources	2	-0-	-0-	-0-	2	1	-0-	-0-	-0-	1
Horticulture	6	-0-	6	-0-	12	3	-0-	-0-	-0-	3
Agriculture-Total	48	-0-	12	-0-	60	23	-0-	1	-0-	24
Engineering Administration & Experiment Stations	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Aeronautical & Astronautical Engineering	3	-0-	4	-0-	7	3	-0-	-0-	-0-	3
Chemical Engineering	1	-0-	4	-0-	5	1	-0-	-0-	-0-	1
Civil Engineering	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Electrical Engineering	-0-	-0-	12	-0-	12	-0-	-0-	-0-	-0-	-0-
Freshman Engineering	-0-	-0-	1	-0-	1	-0-	-0-	2	-0-	2
Industrial Engineering	-0-	-0-	2	-0-	2	-0-	-0-	-0-	-0-	-0-
Interdisciplinary Engineering	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Materials Science Engineering	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Mechanical Engineering	4	-0-	-0-	-0-	4	-0-	-0-	-0-	-0-	-0-
Nuclear Engineering	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Engineering-Total	8	-0-	23	-0-	31	4	-0-	2	-0-	6
Home Economics Administration	-0-	-0-	4	-0-	4	1	-0-	1	-0-	2
Child Development & Family Life	-0-	-0-	-0-	-0-	-0-	2	-0-	-0-	-0-	2
Clothing & Textiles	-0-	-0-	-0-	-0-	-0-	2	-0-	-0-	-0-	2
Foods & Nutrition	-0-	-0-	-0-	-0-	-0-	9	-0-	-0-	-0-	9
Home Management & Family Economics	2	-0-	9	-0-	11	2	-0-	2	-0-	4
Housing, Equipment & Environmental Design	-0-	-0-	2	-0-	2	-0-	-0-	-0-	-0-	-0-
Restaurant, Hotel & Institutional Management	-0-	-0-	4	-0-	4	-0-	-0-	-0-	-0-	-0-
Home Economics-Total	2	-0-	19	-0-	21	16	-0-	3	-0-	19

²⁾Substations are located in Heavilon, Math, Life Science, Pharmacy, Krannert and Electrical Engineering.

TABLE A-1.5
AUDIO-VISUAL CENTER LOANS
CHECK OUTS BY DEPARTMENT
FEBRUARY 1-APRIL 30, 1975

SCHOOL/DEPARTMENT	VIDEO EQUIPMENT TAPE AND TAPE CASSETTES					LOANS FROM SUBSTATIONS (*)				
	Faculty	Staff	Students	Other	Total	Faculty	Staff	Students	Other	Total
Humanities, Social Sciences & Education Administration	1	-0-	-0-	-0-	1	2	-0-	-0-	-0-	2
American Studies	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Audiology & Speech Sciences	2	-0-	5	-0-	7	3	-0-	-0-	-0-	3
Communication	35	-0-	9	-0-	44	42	-0-	2	-0-	44
Creative Arts	2	-0-	23	-0-	25	2	-0-	-0-	-0-	2
Education	16	-0-	4	-0-	20	36	-0-	1	-0-	37
English	1	-0-	-0-	-0-	1	41	-0-	1	-0-	42
Foreign Language & Literature	42	-0-	-0-	-0-	42	-0-	-0-	-0-	-0-	-0-
General Studies	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
History	-0-	-0-	-0-	-0-	-0-	19	-0-	-0-	-0-	19
Philosophy	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Physical Education-Men	4	-0-	-0-	-0-	4	1	-0-	1	-0-	2
Physical Education-Women	4	-0-	-0-	-0-	4	1	-0-	-0-	-0-	1
Political Science	2	-0-	4	-0-	6	5	-0-	1	-0-	6
Psychological Sciences	25	-0-	36	-0-	61	66	-0-	-0-	-0-	66
Sociology & Anthropology	3	-0-	-0-	-0-	3	34	-0-	-0-	-0-	34
Humanities, Social Science & Education-Total	137	-0-	81	-0-	218	252	-0-	6	-0-	258
Industrial Management	4	-0-	4	-0-	8	4	-0-	-0-	-0-	4
Pharmacy Administration	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Bionucleonics	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Clinical Pharmacy	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Industrial & Physical Pharmacy	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Medicinal Chemistry & Pharmacognosy	-0-	-0-	-0-	-0-	-0-	1	-0-	-0-	-0-	1
Pharmacology & Toxicology	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Pharmacy-Total	-0-	-0-	-0-	-0-	-0-	1	-0-	-0-	-0-	1
Science Administration	-0-	-0-	-0-	-0-	-0-	2	-0-	1	-0-	3
Biological Sciences	2	-0-	-0-	-0-	2	11	-0-	-0-	-0-	11
Chemistry	-0-	-0-	2	-0-	1	3	-0-	-0-	-0-	3
Computer Science	-0-	-0-	-0-	-0-	-0-	5	-0-	-0-	-0-	5
Geosciences	-0-	-0-	-0-	-0-	-0-	11	-0-	3	-0-	14
Mathematical Sciences	-0-	-0-	3	-0-	3	2	-0-	-0-	-0-	2
Physics	-0-	-0-	-0-	-0-	-0-	-0-	-0-	1	-0-	1
Statistics	-0-	-0-	-0-	-0-	-0-	1	-0-	-0-	-0-	1
Science-Total	2	-0-	4	-0-	6	35	-0-	5	-0-	40

(*) Substations are located in Heavilon, Math, Life Science, Pharmacy, Krannert and Electrical Engineering.

TABLE A-1.6
AUDIO-VISUAL CENTER LOANS
CHECK OUTS BY DEPARTMENT
FEBRUARY 1-APRIL 30, 1975

SCHOOL/DEPARTMENT	VIDEO EQUIPMENT TAPE AND TAPE CASSETTES					LOANS FROM SUBSTATIONS(3)				
	Faculty	Staff	Students	Other	Total	Faculty	Staff	Students	Other	Total
Technology Administration	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Aviation Technology	-0-	-0-	42	-0-	42	-0-	-0-	-0-	-0-	-0-
Construction Technology	-0-	-0-	-0-	-0-	-0-	2	-0-	-0-	-0-	2
Electrical Technology	-0-	-0-	3	-0-	3	7	-0-	1	-0-	8
Industrial Education	6	-0-	-0-	-0-	6	6	-0-	2	-0-	8
Manufacturing Technology	1	-0-	-0-	-0-	1	-0-	-0-	-0-	-0-	-0-
Nursing Technology	31	-0-	4	-0-	35	6	-0-	-0-	-0-	6
Supervision Technology	5	-0-	-0-	-0-	5	2	-0-	1	-0-	3
Technology-Total	43	-0-	49	-0-	92	23	-0-	4	-0-	27
Veterinary Medicine Administration	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Anatomy	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Animal Clinics	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Microbiology, Pathology & Public Health	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Physiology & Pharmacology	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Veterinary Medicine-Total	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Other Departments (2)	74	-0-	64	20	158	7	-0-	23	7	37
Total Loans	318	-0-	256	20	594	365	-0-	44	7	416

(2) Includes Audio-Visual Production, Agricultural Extension Agents, Graduate School Administration, Library Administration, Audio-Visual Center, Business Offices, etc.

(3) Substations are located in Heavilon, Math, Life Science, Pharmacy, Krannert and Electrical Engineering.

TABLE A-2.1
AUDIO-VISUAL CENTER LOANS
IN-HOUSE USAGE BY DEPARTMENT
FEBRUARY 1-APRIL 30, 1975

SCHOOL/DEPARTMENT	EQUIPMENT					MATERIALS (1)					VIDEO EQUIPMENT TAPE AND TAPE CASSETTES				
	Faculty	Staff	Students	Other	Total	Faculty	Staff	Students	Other	Total	Faculty	Staff	Students	Other	Total
Agricultural Administration	-0-	-0-	-0-	-0-	-0-	-0-	-0-	28	-0-	28	-0-	-0-	159	-0-	159
Agricultural Economics	-0-	-0-	-0-	-0-	-0-	1	-0-	3	-0-	4	-0-	-0-	29	3	32
Agricultural Engineering	-0-	-0-	-0-	-0-	-0-	-0-	-0-	5	-0-	5	-0-	-0-	26	-0-	26
Agronomy	-0-	-0-	1	-0-	1	-0-	-0-	8	-0-	8	-0-	-0-	41	16	57
Animal Sciences	-0-	-0-	1	-0-	1	-0-	-0-	2	-0-	2	-0-	-0-	42	-0-	42
Biochemistry	-0-	-0-	-0-	-0-	-0-	3	-0-	-0-	-0-	3	-0-	-0-	12	-0-	12
Botany & Plant Pathology	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Entomology	-0-	-0-	-0-	-0-	-0-	-0-	-0-	2	-0-	2	-0-	-0-	2	-0-	2
Forestry & Natural Resources	-0-	-0-	1	-0-	1	1	-0-	28	-0-	29	-0-	-0-	38	-0-	38
Horticulture	1	-0-	-0-	-0-	1	17	-0-	19	-0-	36	12	-0-	31	-0-	43
Agriculture-Total	1	-0-	3	-0-	4	22	-0-	95	-0-	117	12	-0-	360	19	411
Engineering Administration & Experiment Stations	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	3	-0-	3
Aeronautical & Astronautical Engineering	-0-	-0-	1	-0-	1	1	-0-	3	-0-	4	-0-	-0-	20	-0-	20
Chemical Engineering	-0-	-0-	1	-0-	1	-0-	-0-	5	-0-	5	-0-	-0-	9	-0-	9
Civil Engineering	-0-	-0-	-0-	-0-	-0-	1	-0-	12	-0-	13	2	-0-	29	-0-	31
Electrical Engineering	-0-	-0-	4	-0-	4	1	-0-	24	-0-	25	2	-0-	61	-0-	63
Freshman Engineering	-0-	-0-	-0-	-0-	-0-	-0-	-0-	59	-0-	59	3	-0-	30	-0-	33
Industrial Engineering	-0-	-0-	-0-	-0-	-0-	-0-	-0-	9	-0-	9	-0-	-0-	29	-0-	29
Interdisciplinary Engineering	-0-	-0-	1	-0-	1	-0-	-0-	4	-0-	4	-0-	-0-	35	-0-	35
Materials Science Engineering	-0-	-0-	1	-0-	1	-0-	-0-	1	-0-	1	-0-	-0-	12	-0-	12
Mechanical Engineering	-0-	-0-	-0-	-0-	-0-	7	-0-	9	1	17	-0-	-0-	14	1	15
Nuclear Engineering	-0-	-0-	-0-	-0-	-0-	-0-	-0-	1	-0-	1	-0-	-0-	-0-	-0-	-0-
Engineering-Total	-0-	-0-	8	-0-	8	10	-0-	127	1	138	7	-0-	242	1	250
Home Economics Administration	-0-	-0-	1	-0-	1	-0-	-0-	70	-0-	70	-0-	-0-	70	-0-	70
Child Development & Family Life	-0-	-0-	-0-	-0-	-0-	-0-	-0-	21	-0-	21	-0-	-0-	1	-0-	1
Clothing & Textiles	-0-	-0-	-0-	-0-	-0-	1	-0-	4	-0-	5	-0-	-0-	9	-0-	9
Foods & Nutrition	-0-	-0-	-0-	-0-	-0-	-0-	-0-	8	-0-	8	-0-	-0-	49	-0-	49
Home Management & Family Economics	-0-	-0-	-0-	-0-	-0-	-0-	-0-	7	-0-	7	-0-	-0-	2	-0-	2
Housing, Equipment & Environmental Design	-0-	-0-	-0-	-0-	-0-	-0-	-0-	12	-0-	12	-0-	-0-	38	-0-	38
Restaurant, Hotel & Institutional Management	-0-	-0-	-0-	-0-	-0-	-0-	-0-	5	-0-	5	-0-	-0-	14	-0-	14
Home Economics-Total	-0-	-0-	1	-0-	1	1	-0-	127	-0-	128	-0-	-0-	183	-0-	183

(1) Includes films, media kits, slides and film strips.

TABLE A-2.2

AUDIO-VISUAL CENTER LOANS

IN-HOUSE USAGE BY DEPARTMENT

FEBRUARY 1-APRIL 30, 1975

SCHOOL/DEPARTMENT	EQUIPMENT					MATERIALS (1)					VIDEO EQUIPMENT TAPE AND TAPE CASSETTES				
	Faculty	Staff	Students	Other	Total	Faculty	Staff	Students	Other	Total	Faculty	Staff	Students	Other	Total
Humanities, Social Sciences & Education Administration	-0-	-0-	-0-	-0-	-0-	-0-	-0-	13	-0-	13	1	-0-	95	-0-	96
American Studies	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Audiology & Speech Sciences	-0-	-0-	-0-	-0-	-0-	-0-	-0-	32	-0-	32	-0-	-0-	161	-0-	161
Communication	-0-	-0-	-0-	-0-	-0-	2	-0-	45	-0-	47	-0-	-0-	213	-0-	213
Creative Arts	1	-0-	-0-	-0-	1	2	-0-	35	-0-	37	7	-0-	156	-0-	163
Education	-0-	-0-	5	-0-	5	9	1	233	-0-	243	1	-0-	428	-0-	429
English	-0-	-0-	2	-0-	2	2	-0-	75	-0-	77	3	-0-	110	-0-	113
Foreign Language & Literature	-0-	-0-	-0-	-0-	-0-	-0-	-0-	10	-0-	10	3	-0-	96	-0-	101
General Studies	-0-	-0-	-0-	-0-	-0-	2	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
History	-0-	-0-	-0-	-0-	-0-	-0-	-0-	22	-0-	24	-0-	-0-	78	-0-	78
Philosophy	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Physical Education-Men	-0-	-0-	-0-	-0-	-0-	-0-	-0-	12	-0-	12	-0-	-0-	52	-0-	52
Physical Education-Women	-0-	-0-	-0-	-0-	-0-	-0-	-0-	8	-0-	8	-0-	-0-	32	-0-	32
Political Science	-0-	-0-	-0-	-0-	-0-	-0-	-0-	15	-0-	15	10	-0-	160	-0-	175
Psychological Sciences	-0-	-0-	1	-0-	1	1	-0-	82	-0-	83	-0-	-0-	132	1	133
Sociology & Anthropology	-0-	-0-	-0-	-0-	-0-	8	-0-	32	-0-	40	1	-0-	47	-0-	48
Humanities, Social Sciences & Education-Total	1	-0-	8	-0-	9	26	1	614	-0-	641	26	5	1762	1	1794
Industrial Management	-0-	-0-	-0-	-0-	-0-	-0-	-0-	153	-0-	153	-0-	-0-	140	-0-	140
Pharmacy Administration	-0-	-0-	-0-	-0-	-0-	-0-	-0-	4	-0-	4	-0-	-0-	16	-0-	16
Bionucleonics	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Clinical Pharmacy	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Industrial & Physical Pharmacy	-0-	-0-	-0-	-0-	-0-	-0-	-0-	1	-0-	1	-0-	-0-	1	-0-	1
Medicinal Chemistry & Pharmacognosy	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Pharmacology & Toxicology	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Pharmacy-Total	-0-	-0-	-0-	-0-	-0-	-0-	-0-	5	-0-	5	-0-	-0-	17	-0-	17
Science Administration	-0-	-0-	-0-	-0-	-0-	-0-	-0-	17	-0-	17	-0-	-0-	48	-0-	48
Biological Sciences	-0-	1	1	-0-	2	3	-0-	71	-0-	74	-0-	-0-	384	7	391
Chemistry	-0-	-0-	-0-	-0-	-0-	1	-0-	22	-0-	23	-0-	-0-	22	-0-	22
Computer Science	-0-	-0-	-0-	-0-	-0-	-0-	-0-	2	-0-	2	-0-	-0-	98	-0-	98
Geosciences	-0-	-0-	-0-	-0-	-0-	1	-0-	21	-0-	22	-0-	-0-	62	-0-	62
Mathematical Sciences	-0-	-0-	2	-0-	2	-0-	-0-	7	-0-	7	-0-	-0-	129	-0-	129
Physics	-0-	-0-	1	-0-	2	-0-	-0-	28	-0-	28	-0-	-0-	19	-0-	19
Statistics	-0-	-0-	-0-	-0-	-0-	-0-	-0-	5	-0-	5	-0-	-0-	1	-0-	1
Science-Total	1	1	4	-0-	6	5	-0-	173	-0-	178	-0-	-0-	763	7	770

(1) Includes films, media kits, slides and film strips.

TABLE A-2.3
AUDIO-VISUAL CENTER LOANS
IN-HOUSE USAGE BY DEPARTMENT
FEBRUARY 1-APRIL 30, 1975

SCHOOL/DEPARTMENT	EQUIPMENT			MATERIALS (1)			VIDEO EQUIPMENT TAPE AND TAPE CASSETTES			
	Faculty	Staff	Students	Other	Total	Faculty	Staff	Students	Other	Total
Technology Administration	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Aviation Technology	-0-	-0-	-0-	-0-	-0-	-0-	-0-	36	-0-	36
Construction Technology	-0-	-0-	-0-	-0-	-0-	-0-	-0-	5	-0-	5
Electrical Technology	-0-	-0-	-0-	-0-	-0-	-0-	-0-	4	-0-	4
Industrial Education	-0-	-0-	-0-	-0-	-0-	-0-	-0-	3	-0-	3
Manufacturing Technology	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Nursing Technology	-0-	-0-	-0-	-0-	-0-	1	-0-	55	-0-	58
Supervision Technology	-0-	-0-	-0-	-0-	-0-	-0-	-0-	22	-0-	22
Technology-Total	-0-	-0-	-0-	-0-	-0-	1	-0-	125	-0-	128
Veterinary Medicine Administration	-0-	-0-	-0-	-0-	-0-	-0-	6	5	4	15
Anatomy	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Animal Clinics	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Microbiology, Pathology & Public Health	-0-	-0-	-0-	-0-	-0-	1	-0-	-0-	-0-	-0-
Physiology & Pharmacology	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Veterinary Medicine-Total	-0-	-0-	-0-	-0-	-0-	1	6	5	4	15
Other Departments (2)	-0-	1	4	4	9	20	12	292	198	522
Total Loans	3	2	28	4	37	86	13	1733	199	2031
								31	3780	995
								41	7392	1027
										8527

(1) Includes films, media kits, slides and film strips.

(2) Includes Audio-Visual Production, Agricultural Extension Agents, Graduate School Administration, Library Administration, Audio-Visual Center, Business Offices, etc.

TABLE A-3.1
AUDIO-VISUAL CENTER LOANS
FEBRUARY 1-APRIL 30, 1975

SCHOOL/DEPARTMENT	LOANS FROM STEWART CENTER			LOANS FROM SUB-CENTERS			TOTAL LOANS		
	Faculty	Staff	Students Other Total	Faculty	Staff	Students Other Total	Faculty	Staff	Students Other Total
Agricultural Administration	129	-0-	243	-0-	-0-	1	129	-0-	244
Agricultural Economics	62	-0-	44	3	-0-	3	65	-0-	44
Agricultural Engineering	40	-0-	40	-0-	-0-	-0-	40	-0-	40
Astronomy	49	-0-	51	4	-0-	4	53	-0-	51
Animal Sciences	43	-0-	56	3	-0-	3	46	-0-	56
Biochemistry	74	-0-	17	3	-0-	3	77	-0-	17
Botany & Plant Pathology	24	-0-	1	6	-0-	6	30	-0-	1
Entomology	7	-0-	16	-0-	-0-	-0-	7	-0-	16
Forestry & Natural Resources	59	-0-	89	1	-0-	1	60	-0-	89
Horticulture	94	-0-	64	3	-0-	3	97	-0-	64
Agriculture-Total	581	-0-	621	23	-0-	24	604	-0-	622
Engineering Administration	14	-0-	3	-0-	-0-	-0-	14	-0-	3
Aeronautical & Astronautical Engineering	36	-0-	56	3	-0-	3	39	-0-	56
Chemical Engineering	14	-0-	45	1	-0-	1	15	-0-	45
Civil Engineering	41	-0-	59	-0-	-0-	-0-	41	-0-	59
Electrical Engineering	16	-0-	191	-0-	-0-	-0-	16	-0-	191
Freshman Engineering	4	-0-	121	-0-	-0-	2	4	-0-	123
Industrial Engineering	40	-0-	69	-0-	-0-	-0-	40	-0-	69
Interdisciplinary Engineering	5	-0-	58	-0-	-0-	-0-	5	-0-	58
Materials Science Engineering	1	-0-	33	-0-	-0-	-0-	1	-0-	33
Mechanical Engineering	56	-0-	64	-0-	-0-	-0-	56	-0-	64
Nuclear Engineering	4	-0-	1	-0-	-0-	-0-	4	-0-	1
Engineering-Total	231	1	700	4	-0-	6	235	1	702
Home Economics Administration	8	-0-	196	1	-0-	1	9	-0-	197
Child Development & Family Life	62	-0-	27	2	-0-	2	64	-0-	27
Clothing & Textiles	24	-0-	22	2	-0-	2	26	-0-	22
Foods & Nutrition	19	-0-	62	9	-0-	9	28	-0-	62
Home Management & Family Economics	27	-0-	27	2	-0-	2	29	-0-	29
Housing, Equipment & Environmental Design	4	-0-	79	-0-	-0-	-0-	4	-0-	79
Restaurant, Hotel & Institutional Management	3	-0-	27	-0-	-0-	-0-	3	-0-	27
Home Economics-Total	147	-0-	440	16	-0-	19	163	-0-	443

TABLE A-3.2
AUDIO-VISUAL CENTER LOANS
FEBRUARY 1-APRIL 30, 1975

SCHOOL/DEPARTMENT	LOANS FROM STEWART CENTER				LOANS FROM SUB-CENTERS				TOTAL LOANS						
	Faculty	Staff	Students	Other	Total	Faculty	Staff	Students	Other	Total	Faculty	Staff	Students	Other	Total
Humanities, Social Sciences & Education Administration	11	-0-	116	-0-	127	2	-0-	-0-	-0-	2	13	-0-	116	-0-	129
American Studies	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Audiology & Speech Sciences	26	-0-	225	-0-	251	3	-0-	-0-	-0-	3	29	-0-	225	-0-	254
Communication	139	-0-	322	-0-	461	42	-0-	-0-	-0-	44	181	-0-	324	-0-	505
Creative Arts	102	-0-	275	-0-	377	2	-0-	-0-	-0-	2	104	-0-	275	-0-	379
Education	327	1	810	1	1139	36	-0-	1	-0-	37	363	1	811	1	1176
English	187	-0-	215	-0-	402	41	-0-	1	-0-	42	228	-0-	216	-0-	444
Foreign Language & Literature	82	-0-	117	1	200	-0-	-0-	-0-	-0-	-0-	82	-0-	117	1	200
General Studies	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
History	118	-0-	147	-0-	265	19	-0-	-0-	-0-	19	137	-0-	147	-0-	284
Philosophy	16	-0-	2	-0-	18	-0-	-0-	-0-	-0-	-0-	16	-0-	2	-0-	18
Physical Education-Men	29	-0-	113	-0-	142	1	-0-	1	-0-	2	30	-0-	114	-0-	144
Physical Education-Women	30	-0-	45	-0-	75	1	-0-	-0-	-0-	1	31	-0-	45	-0-	76
Political Science	56	5	236	-0-	297	5	-0-	1	-0-	6	61	5	237	-0-	303
Psychological Sciences	219	-0-	317	2	538	66	-0-	-0-	-0-	66	285	-0-	317	2	604
Sociology & Anthropology	145	-0-	105	-0-	250	34	-0-	-0-	-0-	34	179	-0-	105	-0-	284
Humanities, Social Sciences & Education-Total	1487	6	3045	4	4542	252	-0-	6	-0-	258	1739	6	3051	4	4800
Industrial Management	32	-0-	372	-0-	404	4	-0-	-0-	-0-	4	36	-0-	372	-0-	408
Pharmacy Administration	-0-	-0-	34	-0-	34	-0-	-0-	-0-	-0-	-0-	-0-	-0-	34	-0-	34
Bionucleonics	-0-	8	-0-	-0-	8	-0-	-0-	-0-	-0-	-0-	-0-	8	-0-	-0-	8
Clinical Pharmacy	1	-0-	-0-	-0-	1	-0-	-0-	-0-	-0-	-0-	1	-0-	-0-	-0-	1
Industrial & Physical Pharmacy	-0-	-0-	4	-0-	4	-0-	-0-	-0-	-0-	-0-	-0-	-0-	4	-0-	4
Medicinal Chemistry & Pharmacognosy	4	-0-	-0-	-0-	4	1	-0-	-0-	-0-	1	5	-0-	-0-	-0-	5
Pharmacology & Toxicology	1	-0-	-0-	-0-	1	-0-	-0-	-0-	-0-	-0-	1	-0-	-0-	-0-	1
Pharmacy-Total	6	8	38	-0-	52	1	-0-	-0-	-0-	1	7	8	38	-0-	53
Science Administration	2	-0-	74	-0-	76	2	-0-	1	-0-	3	4	-0-	75	-0-	79
Biological Sciences	34	1	532	7	574	11	-0-	-0-	-0-	11	45	1	532	7	585
Chemistry	9	-0-	77	-0-	86	3	-0-	-0-	-0-	3	12	-0-	77	-0-	89
Computer Science	18	-0-	115	-0-	133	5	-0-	-0-	-0-	5	23	-0-	115	-0-	138
Geosciences	72	-0-	101	-0-	173	11	-0-	3	-0-	14	83	-0-	104	-0-	187
Mathematical Sciences	17	-0-	155	3	175	2	-0-	-0-	-0-	2	19	-0-	155	3	177
Physics	47	-0-	83	-0-	130	-0-	-0-	1	-0-	1	47	-0-	84	-0-	131
Statistics	1	-0-	9	-0-	10	1	-0-	-0-	-0-	1	2	-0-	9	-0-	11
Science-Total	200	1	1146	10	1357	35	-0-	5	-0-	40	235	1	1151	10	1397

TABLE A-3.3
AUDIO-VISUAL CENTER LOANS
FEBRUARY 1-APRIL 30, 1975

SCHOOL/DEPARTMENT	LOANS FROM STEWART CENTER				LOANS FROM SUB-CENTERS				TOTAL LOANS						
	Faculty	Staff	Students	Other	Total	Faculty	Staff	Students	Other	Total	Faculty	Staff	Students	Other	Total
Technology Administration	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Aviation Technology	89	-0-	99	-0-	188	-0-	-0-	-0-	-0-	-0-	89	-0-	99	-0-	188
Construction Technology	6	-0-	10	-0-	16	2	-0-	-0-	-0-	2	8	-0-	10	-0-	18
Electrical Technology	17	-0-	27	-0-	44	7	-0-	1	-0-	8	24	-0-	28	-0-	52
Industrial Education	38	-0-	29	-0-	67	6	-0-	2	-0-	8	44	-0-	31	-0-	75
Manufacturing Technology	75	-0-	36	-0-	111	-0-	-0-	-0-	-0-	-0-	75	-0-	36	-0-	111
Nursing Technology	104	-0-	168	-0-	272	6	-0-	-0-	-0-	6	110	-0-	168	-0-	278
Supervision Technology	36	-0-	54	-0-	90	2	-0-	1	-0-	3	38	-0-	55	-0-	93
Technology-Total	365	-0-	423	-0-	788	23	-0-	4	-0-	27	388	-0-	427	-0-	815
Veterinary Medicine Administration	15	5	3	4	27	-0-	-0-	-0-	-0-	-0-	15	5	3	4	27
Anatomy	2	-0-	-0-	-0-	2	-0-	-0-	-0-	-0-	-0-	2	-0-	-0-	-0-	2
Animal Clinics	9	-0-	-0-	-0-	9	-0-	-0-	-0-	-0-	-0-	9	-0-	-0-	-0-	9
Microbiology, Pathology & Public Health	8	-0-	-0-	-0-	8	-0-	-0-	-0-	-0-	-0-	8	-0-	-0-	-0-	8
Physiology & Pharmacology	6	-0-	-0-	-0-	6	-0-	-0-	-0-	-0-	-0-	6	-0-	-0-	-0-	6
Veterinary Medicine-Total	40	5	3	4	52	-0-	-0-	-0-	-0-	-0-	40	5	3	4	52
Other Purdue	921	501	4792	3241	9455	7	-0-	23	7	37	928	501	4815	3248	9492
Grand Total	4009	522	11580	3293	19404	365	-0-	44	7	416	4374	522	11624	3300	19820

APPENDIX B

LIBRARY COSTS

A summary of library costs by function and department is shown in Table B-1. Library stock purchased was based on fiscal records. Processing costs were based on average acquisitions costs and average cataloging costs. Service costs were based on each department's use of each library and are not comparable to service costs presented earlier which were based on each department's use of the entire library system.

Operating costs for each library service location are presented in Table B-2. Processing center operating costs are summarized in Table B-3.

TABLE B-1.1
LIBRARIES AND AUDIO-VISUAL CENTER
LIBRARIES COST BY DEPARTMENT AND FUNCTION (1)
1974-75

SCHOOL/DEPARTMENT	BOOKS			SERIALS			OTHER (2) PROCESSING	SERVICE (3) CGCTS	TOTAL
	Stock	Processing	Total	Stock	Processing	Total			
Agricultural Administration	\$ 922	\$ 477	\$ 1399	\$ 2588	\$ 535	\$ 3123	\$ 162	\$ 34092	\$ 38776
Agricultural Economics	2853	3665	6218	5829	3412	9241	312	29634	45665
Agricultural Engineering	308	193	501	1070	997	2067	114	2665	5347
Astronomy	1043	1029	2072	9121	3898	13019	119	12079	27289
Animal Sciences	1380	1000	2380	4886	2761	7647	237	20141	27289
Biochemistry	2438	2077	4515	16776	2595	19371	205	9877	35403
Botany & Plant Pathology	1438	1575	3013	11343	4746	16089	146	7544	26792
Entomology	912	805	1717	4275	2110	6385	153	7543	15798
Forestry & Natural Resources	1180	2357	3537	3777	3228	7005	180	19111	29633
Horticulture	820	849	1669	4255	2358	6613	260	10678	19220
Agriculture-Total	13294	13727	27021	63920	26640	90560	1888	144795	264264
Engineering Administration	-0-	-0-	-0-	2492	643	3135	306	2096	5537
Aeronautical & Astronautical Engineering	3232	4727	7959	35361	8683	44044	301	24759	77063
Chemical Engineering	2416	2097	4513	7816	2453	10269	59	19487	34328
Civil Engineering	4547	4802	9349	9461	5073	14534	182	36431	60496
Electrical Engineering	4999	4333	9332	23081	5601	28682	554	34419	72967
Freshman Engineering	-0-	-0-	-0-	547	263	810	75	19639	20524
Industrial Engineering	3218	3292	6510	4734	2343	7077	342	17871	31800
Interdisciplinary Engineering	-0-	-0-	-0-	-0-	-0-	-0-	18	7875	7893
Materials Science Engineering	1729	1360	3089	9594	2839	12433	28	5469	21019
Mechanical Engineering	4102	3715	7817	25449	6664	32113	367	32571	72868
Nuclear Engineering	1944	1701	3645	4509	967	5476	48	9730	18899
Engineering-Total	26187	26027	52214	123044	35529	158573	2280	210347	423414
Home Economics Administration									
Child Development & Family Life									
Clothing & Textiles									
Foods & Nutrition									
Home Management & Family Economics									
Housing, Equipment, & Environmental Design									
Restaurant, Hotel & Institutional Management									
Home Economics-Total	4907	7116	12023	6986	5752	12738	306	99992	125059

(1) Allocations combines intended use for purchase of materials and actual use of services.

(2) Other processing includes costs incurred by the library in purchasing materials for the use of departments from departmental accounts.

(3) Allocated according to usage of each library, see discussion p. 10.

(4) Library fiscal system does not include breakdowns by department for Home Economics, Pharmacy or Veterinary Medicine.

TABLE B-1.2
LIBRARIES AND AUDIO-VISUAL CENTER
LIBRARIES COST BY DEPARTMENT AND FUNCTION (1)

1974-75

SCHOOL/DEPARTMENT	BOOKS			SERIALS			OTHER (2) PROCESSING	SERVICE (3) COSTS	TOTAL
	Stock	Processing	Total	Stock	Processing	Total			
Humanities, Social Sciences, & Education Administration	\$ 748 -0- 2223	\$ 819 -0- 1402	\$ 1567 -0- 3625	\$ 825 -0- 1657	\$ 133 -0- 1076	\$ 958 -0- 2743	\$ 119 -0- 160	\$ 16417 307 16621	\$ 19061 307 23149
American Studies	4399	3717	8116	3794	2302	6096	9	40247	54468
Audiology & Speech Sciences	14917	15872	30789	2408	1713	4121	20	36610	71540
Communication	11661	18716	30377	6960	6792	13752	595	98223	142947
Creative Arts	34215	43071	77286	9122	10628	19750	89	70740	167665
Education	31876	41543	73419	7045	8518	15563	335	46761	136078
English	-0-	-0-	-0-	-0-	-0-	-0-	3	307	310
Foreign Language & Literature	36357	33690	70047	8555	7193	15748	75	42836	128706
General Studies	13277	17167	30444	4169	3541	7710	16	9409	47579
History	1054	953	2007	714	902	1616	27	14989	18639
Philosophy	843	998	1841	536	365	901	66	11813	14621
Physical Education-Men	14087	20242	34329	15920	7342	23262	77	95614	95614
Physical Education-Women	11038	11211	22249	13674	5870	19544	572	42162	84527
Political Science	12016	15717	27733	12197	8101	20298	632	34078	82741
Psychological Sciences									
Sociology & Anthropology									
Humanities, Social Sciences & Education-Total	188711	225118	413829	87586	64476	152062	2795	523466	1092152
Industrial Management	22089	32113	54202	29028	14854	43882	547	117839	216470
Pharmacy Administration									
Bionucleonics								9544	9544
Clinical Pharmacy								9534	9534
Industrial & Physical Pharmacy								1822	1822
Medicinal Chemistry & Pharmacognosy							(4)	5060	(4)
Pharmacology & Toxicology								8545	8545
Pharmacy-Total	16075	15410	31485	33823	8488	42311	506	6979	115786
Science Administration	91	12	103	1278	446	1724	299	41484	14421
Biological Sciences	7267	7173	14440	51786	18711	62597	1236	12295	14421
Chemistry	13870	15045	28915	57574	10477	68051	830	62276	140549
Computer Science	1176	1424	2600	4576	1285	5861	116	68793	166589
Geosciences	4019	3522	7541	13345	4838	18183	134	44211	52788
Mathematical Sciences	3754	4514	8268	24684	6873	31557	80	51480	77338
Physics	10698	8377	19075	39596	6553	46149	166	17407	57312
Statistics	706	857	1563	2638	729	3367	30	16666	82056
Science-Total	41581	40924	82505	195477	42012	237489	2891	7826	12786
								280954	603839

(1) Allocation of intended use for purchase of materials and actual use of services.

(2) Other processing includes costs incurred by the library in purchasing materials for the use of departments from departmental accounts.

(3) Allocated according to usage of each library, see discussion p. 10.

(4) Library fiscal system does not include breakdowns by department for Home Economics, Pharmacy, or Veterinary Medicine.

TABLE B-1.3
LIBRARIES AND AUDIO-VISUAL CENTER
LIBRARIES COST BY DEPARTMENT AND FUNCTION (1)
1974-75

SCHOOL/DEPARTMENT	BOOKS			SERIALS			OTHER (2) PROCESSING	SERVICE (3) COSTS	TOTAL
	Stock	Processing	Total	Stock	Processing	Total			
Technology Administration	\$ -0-	\$ -0-	\$ -0-	\$ 452	\$ 273	\$ 725	\$ -0-	\$ -0-	\$ 725
Aviation Technology	1634	817	2451	3045	1415	4460	121	9223	16555
Construction Technology	56	30	86	24	3	27	11	1615	1739
Electrical Technology	751	507	1258	-0-	-0-	-0-	3	3659	4920
Industrial Education	504	491	995	280	444	724	25	9922	11436
Manufacturing Technology	66	89	155	-0-	-0-	-0-	5	5012	5172
Nursing Technology	1356	1847	3203	700	717	1417	197	10788	15605
Supervision Technology	226	134	360	-0-	-0-	-0-	14	2479	12780
Technology-Total	4593	3915	8508	4501	2622	7123	376	42998	59005
Veterinary Medicine Administration									
Anatomy							71	13942	
Animal Clinics							82	3926	
Microbiology, Pathology & Public Health		(4)			(4)		37	2023	(4)
Physiology & Pharmacology							59	9244	
Veterinary Medicine-Total							27	1669	
Other Purdue	13572	11195	24767	51430	15158	66588	276	31504	123135
Interlibrary Loan & Public	26730	24098	50828	79346	25364	104710	3511	38623	197672
Total	357739	399643	757382	675141	240895	916036	15376	128852	128852
								1660854	3349648

- (1) Allocation combines intended use for purchase of materials and actual use of services.
 (2) Other processing includes costs incurred by the library in purchasing materials for the use of departments from departmental accounts.
 (3) Allocated according to usage of each library, see discussion p. 10.
 (4) Library fiscal system does not include breakdowns by department for Home Economics, Pharmacy or Veterinary Medicine.

TABLE B-2
LIBRARIES AND AUDIO-VISUAL CENTER
OPERATING COSTS OF LIBRARY SERVICE LOCATIONS (1)
1974-75

SERVICE LOCATION	DIRECT COSTS					INDIRECT COSTS			GRAND TOTAL
	Salaries & Wages	Fringe Benefits	Space & Utilities	Major Equip.	Supplies & Expense	Total	Administration(2)	Other(3)	Total
Aero, Astro, & Industrial Engr.	\$ 23763	\$ 1999	\$ 16101	\$ -0-	\$ 66	\$ 41929	\$ 8631	\$ 2749	\$ 11380
Agricultural Engr.	122	21	1518	-0-	-0-	1661	375	106	481
Aviation Technology	3575	166	3546	-0-	259	7546	750	211	961
Biochemistry	3567	237	2262	-0-	-0-	6066	750	211	7027
Chemistry	26936	2590	28686	128	371	58711	12008	3912	15920
Chemical Engr. & Materials									
Science Engr.	11973	856	5364	-0-	33	18226	5629	1692	7321
Civil Engr.	13227	611	8781	-0-	-0-	22619	3377	1057	4434
Education	8695	586	3066	-0-	-0-	12347	6004	1903	7907
Electrical Engr.	10146	527	2280	-0-	67	19020	3377	1057	4434
Entomology	622	-0-	3321	-0-	-0-	3943	375	106	481
Forestry-Horticulture									
General	4321	254	3972	-0-	31	8578	750	317	1067
Geosciences	284915	20382	360840	-0-	3572	669709	73922	25777	97499
Home Economics	6705	358	4259	114	135	11551	2627	740	3367
Krannert	16243	1710	6406	-0-	67	24426	9006	2960	11966
Life Science	53371	5286	72645	-0-	192	131494	33396	10678	44074
Mathematical Sciences	38682	3606	39093	557	498	82436	16135	5181	21316
Mechanical Engr.	19761	1420	24186	207	55	45629	9756	3172	12928
Nuclear Engr.	10887	590	6057	-0-	60	17594	2251	740	2991
Pharmacy	2582	265	4614	-0-	299	7760	1876	529	2405
Philosophy-Political Science	19386	1414	17118	-0-	234	38152	14634	4652	19286
Physics	2589	193	1335	-0-	-0-	4117	1126	423	1549
Psychology	21969	2019	33798	-0-	28	57814	11532	3700	15332
Veterinary Medicine	11718	910	7818	52	-0-	20498	6379	2009	8388
Total	21208	2390	8547	-0-	192	32340	15385	4864	20249
	\$ 616963	\$ 48390	\$ 671593	\$ 1058	\$ 6162	\$ 1344166	\$ 240151	\$ 76546	\$ 316697
									\$ 1660863

(1) Includes only direct user services, such as circulation, reference, etc. Salaries and wages associated with processing have been included in processing costs.

(2) Administration includes personnel, fiscal, systems, research, and the administrative offices.

(3) Other includes items which could not be allocated directly such as telephone, postage, etc. See Table 2 for detail.

TABLE B-3
LIBRARIES AND AUDIO-VISUAL CENTER
OPERATING COSTS OF LIBRARY MATERIALS
PROCESSING CENTERS
1974-75

	<u>Acquisitions</u>	<u>Cataloging</u>	<u>Total</u>
Salaries & Wages	\$ 210331	\$ 212547	\$ 422878
Fringe Benefits	11641	15556	27197
Space & Utilities	15051	15588	30639
Equipment	-0-	1169	1169
Computer Expense	34067	15685	49752
Supplies & Expense	<u>1549</u>	<u>2338</u>	<u>3887</u>
Total Direct	\$ 272639	\$ 262883	\$ 535522
Administration ⁽¹⁾	\$ 33396	\$ 57786	\$ 91182
Other ⁽²⁾	<u>10784</u>	<u>18396</u>	<u>29180</u>
TOTAL	\$ 316819	\$ 339065	\$ 655884

(1) Administration includes personnel, fiscal, systems, research, and the administrative offices.

(2) Other includes items which could not be allocated directly, such as, telephone, postage, etc. See Table 2 for detail.

APPENDIX C

CIRCULATION OF MATERIALS FROM
PURDUE UNIVERSITY LIBRARIES

By
Miriam A. Drake
RDU 75-06

Research Development Unit
Purdue University
Libraries and Audio-Visual Center
West Lafayette, Indiana

September 1975

INTRODUCTION

In March 1974, the Research Development Unit (RDU) began a cost allocation study of the Purdue Libraries and Audio-Visual Center. The objectives of the study are to: 1) ascertain the costs of providing library and audio-visual services and materials to the West Lafayette campus; 2) allocate costs by user group and academic department; and 3) allocate costs by library function. The second objective, allocation of library costs by user group, is the subject of this report. A final report for the entire study will be issued later in the year. Allocation data for the Audio-Visual Center will be included in the final report.

Before library costs could be allocated by user group and academic department it was necessary to determine the users of the Purdue Libraries. Data on user identification was not readily available; therefore, a circulation survey was undertaken. The survey was conducted during the busiest three months of second semester, February 1 through April 30, 1975.

METHODOLOGY

Since Purdue's library circulation systems are manual it was not feasible to include every library transaction in the survey. Individuals collecting data were asked to include materials borrowed for overnight or longer in the sample. In addition, libraries which offer photocopy service were asked to report their photocopy activity for the sample period. In-library use of materials, Bookstall, and reserve materials were excluded from the study due to the difficulty and expense of data collection. It is assumed that reserve book usage is highest among people involved with courses for which the books are reserved. It has been suggested that over-the-counter circulation counts are poor indicators of library usage. One study has shown that there is a high positive correlation between books used inside and outside the library. McGrath, in his study, concluded that total library usage could be estimated from over-the-counter loan records for both subjects used and department of borrower.*

*William E. McGrath. "Correlating the Subjects of Books Taken Out of and Books Used Within an Open-Stack Library." College and Research Libraries, July 1971.

Two libraries, General and Krannert, use a multi-part key sort transaction card for library loans. Copies of transaction cards were sent to the Research Development Unit after materials were returned to the library. The sample period for these libraries was extended one week in order to gather data on semester loans and other materials which were charged out before April 30 but returned before May 6.

Other Purdue libraries use a book card, on which the borrower signs his/her name, for circulation control. Duplication of these cards was precluded by time, convenience, and expense. In addition, book cards generally do not contain sufficient data to fully identify the borrower. Special forms and imprints to be used for data collection were issued to libraries using book cards. These forms, which were precoded for location, were sent to the Research Development Unit weekly during the study.

All libraries were instructed to ask every borrower for a passport (if Purdue student) or other means of identification, such as staff card, bursar's receipt, etc. All passports were imprinted on forms. Borrowers associated with Purdue but not in possession of a passport, were asked to present other identification and to give their status (faculty, student, staff) and department. These data were recorded on transaction cards or forms. There were two classes of borrowers not associated with Purdue; general public and interlibrary loan users. Public borrowers using the libraries were classified as "other". Interlibrary loans were classified separately by library location.

Identification of borrowers at each location was the prime purpose of the circulation survey; however, questions had been raised regarding the subject areas of materials borrowed by different groups from specific libraries. For example, it would be of interest to know how many Industrial Engineering students were using the Mathematical Sciences library for books on statistics. In order to answer these questions, libraries were asked to record the Dewey class number up to two places beyond the decimal point on forms to be included in the sample.

When forms were received by RDU a notation was made on a master control list to indicate that forms had been received for the specific library and week. In addition, each packet of forms was given a batch number which was used to maintain control between RDU and keypunching. Forms were examined for errors, presence of social security number or other means of identifying the borrower and presence of Dewey class numbers. After editing, forms were sent to keypunching.

The completed punched cards were sent to the Administrative Data Processing Center for processing. Social security numbers, which were punched from passport data, were matched against files from the Registrar's Office and Personnel Office to determine the status and department of the borrower. When a match could not be made, the transaction was labeled "error" and excluded from the final tabulation. All records containing social security number in RDU's files were destroyed to protect the privacy of individuals. Data were summed by level, department, and library location.

FINDINGS

The survey sample includes 100,240 items loaned directly from 23 libraries and 4361 photocopied items made by 8 libraries. The General library circulated 48.6% of the items in the sample (Table 1). It was believed that this figure was somewhat inflated because items which are part of school and departmental collections are stored in the attic of the General library and the 9th Street Warehouse and are charged out through the General library. Statistics maintained by the circulation staff indicate that approximately 85 items, less than 1% of General's total for the period, circulated from the General library were items from school and departmental collections.

Circulation in the school and departmental libraries ranged by 6460 items (6.2%) in the Krannert library to 63 items (.1%) in the Agricultural Engineering library. There were 13 libraries with less than 2000 items circulated. This group includes 4 engineering libraries which are scheduled for consolidation and 4 libraries associated with the School of Agriculture. The latter 4 libraries together circulated 2768 items during the survey period. Photocopies provided by Biochemistry represented 18% of the total circulation of the 4 libraries and 52% of the loans made from the Biochemistry library.

Undergraduates charged out the greatest number of items while graduate students received the greatest number of photocopies (Table 2). The

General library loaned the greatest proportion of items to each group on the campus (Tables 3 and 3A). Libraries receiving greatest use by faculty were General (38.1%), Chemistry (8.8%), Mathematical Sciences (8.8%), and Krannert (7.7%). The patterns of library use were similar for graduate students except that they used the Psychology library more heavily than the faculty. Undergraduates used General (62.2%), Home Economics (7.5%), and Life Science (5.2%) most heavily.

Interlibrary loans during the sample period were more evenly distributed throughout the system. Lending was greatest from General (19.0%), Life Science (13.4%), Pharmacy (12.0%), and Veterinary Medicine (11.3%). This distribution is not surprising in view of the specialized nature of these collections and their uniqueness in the State.

Purdue students and faculty borrowed 87.1% of items included in the sample (Table 4). Usage by School ranks as follows:

1. Humanities, Social Science, and Education	33.0%
2. Science	15.6%
3. Engineering	11.8%
4. Agriculture	8.2%
5. Home Economics	7.7%
6. Industrial Administration	5.3%
7. Technology	2.6%
8. Pharmacy	2.1%
9. Veterinary Medicine	.8%

Circulation by school provides only a gross indication of usage among different disciplines and users. More meaningful information can

be derived by combining circulation and population data to produce per capita usage and distributions of usage compared to population (Tables 5.1, 5.2, 5A.1, 5A.2, 6.1 and 6.2). The figures below were calculated on the basis of head count data provided by the Registrar's Office for second semester and the University Personnel Office.

Per Capita Loans by School

School	Faculty		Graduate Student		Undergraduate	
	Per Capita Loans	Rank	Per Capita Loans	Rank	Per Capita Loans	Rank
Agriculture	3.2	7	5.2	9	1.6	4
Engineering	4.6	5	6.5	7	1.3	6
Home Economics	3.0	8	10.0	1	3.5	2
Humanities, Social Science & Education	7.1	2	8.5	5	3.9	1
Industrial Admin.	5.1	4	5.7	8	1.4	5
Pharmacy	5.5	3	9.0	4	.9	8
Science	7.3	1	8.4	6	2.2	3
Technology	1.0	9	9.5	3	1.3	7
Veterinary Medicine	3.8	6	9.9	2	0	9
Total	5.2	-	7.7	-	2.1	-

Per capita loans to faculty were greatest in Science; Humanities, Social Sciences, and Education (HSSE); and Pharmacy. Graduate student use was greatest in Home Economics, Veterinary Medicine, and Technology, with HSSE ranking fifth. Undergraduate use was greatest in HSSE, Home Economics, and Science. Library usage in relation to population can be seen by comparing the percentage distribution of loans and population

for each population group. Tables 5A.1 and 5A.2 show the percentage distribution for schools and department.

Distribution of Library Loans and
Population Groups--West Lafayette Campus

School	Faculty		Graduate Student		Undergraduate	
	% of Population	% of Loans	% of Population	% of Loans	% of Population	% of Loans
Agriculture	19.9	12.3	9.5	6.4	15.0	11.4
Engineering	16.1	14.1	18.2	15.4	19.9	11.7
Home Economics	3.8	2.2	4.4	5.7	7.9	13.1
Humanities, Social Science & Education	25.0	34.3	36.7	40.6	19.7	36.4
Industrial Administration	3.7	3.6	7.6	5.6	11.1	7.2
Pharmacy	3.7	3.9	2.8	3.3	3.3	1.3
Science	18.6	26.0	18.7	20.3	13.5	13.8
Technology	5.8	1.1	.9	1.1	8.3	5.1
Veterinary Medicine	3.4	2.5	1.2	1.6	1.3	0
Total	100.0	100.0	100.0	100.0	100.0	100.0

ALLOCATION METHODS

The cost study will utilize two methods to allocate library costs. The first method will divide library costs into two general categories; processing and service. Processing costs are all costs associated with the purchase decision, order, receipt, classification, cataloging, and marking of materials. Under this technique, the cost and number of materials purchased are determined for each department fund. The processing cost is then divided among the departments on a unit basis.

$$P_i = M_i + T_i$$

where P_i = total processing and material cost for any department

M_i = cost of materials for the department

T_i = processing costs

$$T_i = \frac{A_i}{A}(C_1) + \frac{D_i}{D}(C_2)$$

where A_i = number of items purchased for the department

A = total number of items purchased

C_1 = acquisitions costs

D_i = number of items cataloged for the department

D = total number of items cataloged

C_2 = cost of cataloging, classification, marking, etc.

Acquisitions and cataloging costs will be further subdivided into serials and monographs.

The costs of providing service to library users is not expected to be uniform throughout the system. Service costs which are allocated to user groups will vary among libraries in proportion to space, equipment, staffing, etc. The cost of operating public facilities, reference, circulation and other services is determined and allocated on the basis of recorded circulation. In order to determine average costs for library system services to a department the following formula will be used:

$$S_1 = \frac{X_1}{X}(Y)$$

where S_1 = service cost for a department

X_1 = number of loans by faculty and students in the department

X = total number of loans

Y = total service costs

This formula does not account for the differences in operating costs among the school and departmental libraries; therefore, a separate allocation will be made for each department's use of each library location. These costs will be summed to show the total cost of providing services to each department.

$$S_1 = \frac{u_{1.1}}{U_1} (L_1) + \frac{u_{1.2}}{U_2} (L_2) + \dots + \frac{u_{1.23}}{U_{23}} (L_{23})$$

where S_1 = cost of providing service to one department

$u_{1.1}$ = number of loans to users in one department from library 1

U_1 = total loans from library 1

L_1 = operating costs of library 1

$u_{1.2}$ = number of loans to users in one department from library 2

U_2 = total loans in library 2

L_2 = operating cost of library 2

The two elements of processing and service are combined to give a total cost for providing materials and service to a department

$$L_i = T_i + S_i \text{ or } L_i = T_i + S_1$$

where L_i = total costs of library service to a department

The second allocation method combines all costs associated with the libraries and attributes them to departments on the basis of usage. The gross allocation percentages are in the last column of Table 4. After costs have been attributed to specific departments both techniques further subdivide costs on the basis of usage by level. For example, if the total cost of operating the libraries were \$1,000,000, 5.3% or \$53,000 would be attributed to the School of Industrial Administration. This cost would be further attributed as follows:

Faculty	6.6%	\$ 3,498
Graduate Students	37.8%	20,034
Undergraduates	<u>55.6%</u>	<u>39,468</u>
Total	100.0%	\$53,000

The allocation of faculty usage to instructional programs will be made by the Office of Analytic Studies.

RECOMMENDATIONS

The circulation study has fulfilled its primary objective of providing data on which to base the allocation of library costs. The basic data has been preserved on magnetic tape providing a data base for further analysis.

Each departmental or school librarian has received a printout showing usage of appropriate libraries and departments. These data need further analysis to show travel patterns by borrowers on the campus. It is suggested that Industrial Engineering students be invited to analyze the data from a logistics point of view. This type of study could yield information which could be used in future considerations of new facilities or combined collections.

Further consideration should be given to consolidation of collections from which circulation is small. For example, small collections in Agriculture, such as Forestry-Horticulture, Entomology, Biochemistry, and Agricultural Engineering are maintained in four separate facilities. Each library circulates a small number of items.

Additional study should be given to the use of materials in special subject areas. The circulation study indicated that libraries such as Mathematics and Psychology, are serving substantial number of students and faculty from outside their home departments. The Dewey class numbers of materials used by outsiders should be analyzed to determine their

general subject areas, and the extent of use by the home department and outsiders. Duplication of heavily used items through departmental or other funding should be considered where appropriate.

There are two important circulation data needs which were not satisfied by this study. The first need is the determination of the number of individual users relative to the population. At present, there is no convenient method of estimating the number of individual faculty members or students who actually use the library and the number who do not use the library. This data would be useful in planning future library services.

The second information need relates to the distribution of loans of material in each location. Specifically, a study should be undertaken to determine the number of books and journals which actually circulate, the number of times each piece is loaned and the proportion of each collection which is seldom or never used. This data would provide the basis for weeding collections and facilities planning.

Table 1

Research Development Unit
Circulation Study
Loans by Location

Library	Number of loans	Number of items photocopied	Total loans*	% of Total
General	50,868	0	50,868	48.6
Krannert	6,460	0	6,460	6.2
Life Science	5,831	141	5,972	5.7
Chemistry	2,927	2,447	5,374	5.1
Psychology	5,214	0	5,214	5.0
Home Economics	4,946	0	4,946	4.7
Mathematical Sciences	3,814	78	3,892	3.7
Pharmacy	2,133	690	2,823	2.7
Aero, Astro, & Ind. Engrg.	2,239	0	2,239	2.1
Electrical Engrg.	2,097	29	2,126	2.0
Civil Engrg.	1,967	0	1,967	1.9
Physics	1,802	141	1,943	1.9
Veterinary Medicine	1,553	326	1,879	1.8
Mechanical Engrg.	1,637	0	1,637	1.6
Chemical Engrg. & Materials Science Engrg.	1,595	0	1,595	1.5
Forestry-Horticulture	1,506	0	1,506	1.4
Geosciences	1,409	0	1,409	1.4
Biochemistry	469	509	978	.9
Philosophy-Political Science	638	0	638	.6
Nuclear Engrg.	466	0	466	.5
Aviation Technology	385	0	385	.4
Entomology	221	0	221	.2
Agricultural Engrg.	63	0	63	.1
Total	100,240	4,361	104,601	100.0

*Includes photocopied items in Biochemistry, Chemistry, Electrical Engineering, Life Science, Mathematical Science, Pharmacy, Physics, and Veterinary Medicine. Loans for libraries will self service photocopy equipment is understated due to lack of data on number of items photocopied by users.

Table 2
Research Development Unit
Circulation Study
Loans by Level of User

<u>Level</u>	<u>Number of loans</u>	<u>Number of items photocopied</u>	<u>Total loans</u>	<u>% of total</u>
Faculty	9,522	1,235	10,757	10.3
Graduate Students	35,860	2,182	38,042	36.4
Undergraduates	43,567	140	43,707	41.8
Purdue University Staff	3,759	239	3,998	3.8
Interlibrary Loan	2,002	449	2,451	2.3
Other	5,530	116	5,646	5.4
Total	100,240	4,361	104,601	100.0

Table 3

Research Development Unit
Circulation Study
Loans by Location and Level⁽¹⁾

Library	Faculty		Graduate Students		Undergraduates		Interlibrary Loans	
	Number of loans	% of total	Number of loans	% of total	Number of loans	% of total	Number of loans	% of total
Aero, Astro, & Industrial Engrg.	257	2.3	895	2.3	630	1.4	121	4.9
Agricultural Engrg.	15	.2	27	.1	11	(2)	0	0
Aviation Technology	29	.3	1	(2)	337	.8	4	.2
Biochemistry	249	2.3	216	.6	37	.1	21	.9
Chemistry	948	8.8	3,376	8.9	643	1.5	39	1.6
Chemical Engrg. and Materials Science Engrg.	193	1.8	885	2.3	308	.7	111	4.5
Civil Engrg.	105	1.0	811	2.1	777	1.8	56	2.3
Electrical Engrg.	342	3.2	1,134	3.0	404	.9	80	3.3
Entomology	40	.4	36	.1	125	.3	8	.3
Forestry-Horticulture	89	.8	224	.6	1,078	2.5	60	2.5
General ⁽³⁾	4,099	38.1	14,756	38.8	27,193	62.2	466	19.0
Geosciences	250	2.3	332	.9	425	1.0	43	1.8
Home Economics	262	2.4	981	2.6	3,287	7.5	99	4.0
Krannert	826	7.7	3,303	8.7	1,681	3.9	187	7.6
Life Science	583	5.4	2,076	5.4	2,276	5.2	329	13.4
Mathematical Sciences	943	8.8	1,848	4.8	738	1.7	76	3.1
Mechanical Engrg.	144	1.3	722	1.9	573	1.3	60	2.5
Nuclear Engrg.	26	.2	244	.6	151	.3	6	.2
Pharmacy	383	3.6	1,201	3.2	699	1.6	294	12.0
Philosophy-Political Science	105	1.0	369	1.0	111	.2	6	.2
Physics	248	2.3	1,116	2.9	349	.8	39	1.6
Psychology	320	3.0	2,768	7.3	1,650	3.8	69	2.8
Veterinary Medicine	301	2.8	721	1.9	224	.5	277	11.3
Total	10,757	100.0	38,042	100.0	43,707	100.0	2,451	100.0

(1) Includes photocopied items in Biochemistry, Chemistry, Electrical Engineering, Life Science, Mathematical Sciences, Pharmacy, Physics, and Veterinary Medicine.

(2) Less than .1%

(3) Includes loans of departmental library material stored in the attic or warehouse

Table 3A

Research Development Unit
Circulation Study
Percent Distribution of Loans to
Purdue User Groups by Location

Library	Loans to Purdue Users ⁽¹⁾	Percent Distribution		
		Faculty	Graduate Students	Under- Graduates
Aero, Astro, & Indus- trial Engrg.	1,702	14.4	50.2	35.4
Agricultural Engrg.	43	28.3	50.9	20.8
Aviation Technology	367	7.9	.3	91.8
Biochemistry	502	49.6	43.0	7.4
Chemistry	4,967	19.1	68.0	12.9
Chemical Engrg. and Materials Science Engrg.	1,386	13.9	63.9	22.2
Civil Engrg.	1,693	6.2	47.9	45.9
Electrical Engrg.	1,880	18.2	60.3	21.5
Entomology	201	19.9	17.9	62.2
Forestry-Horticulture	1,391	6.4	16.1	77.5
General ⁽²⁾	46,048	8.9	32.0	59.1
Geosciences	1,007	24.8	33.0	42.2
Home Economics	4,530	5.8	21.6	72.6
Krannert	5,810	14.2	56.9	28.9
Life Science	4,935	11.8	42.1	46.1
Mathematical Sciences	3,529	26.7	52.4	20.9
Mechanical Engrg.	1,439	10.0	50.2	39.8
Nuclear Engrg.	421	6.2	57.9	35.9
Pharmacy	2,283	16.8	52.6	30.6
Philosophy-Political Science	585	17.9	63.1	19.0
Physics	1,713	14.5	65.1	20.4
Psychology	4,738	6.8	58.4	34.8
Veterinary Medicine	1,246	24.1	57.9	18.0
Total	92,506	11.6	41.1	47.3

(1) Includes photocopied items.

(2) Includes loans of departmental library material stored in the attic and warehouse.

Table 4.1

Research Development Unit
Circulation Study
Loans to Faculty and Students
By School and Department

<u>School/Department</u>	<u>Number of loans</u>	<u>Number of items photocopied</u>	<u>Total loans^a</u>	<u>% of total</u>
Agriculture-Administration	2,171	1	2,172	2.1
Agricultural Economics	1,175	0	1,175	1.1
Agricultural Engineering	131	0	131	.1
Agronomy	696	0	696	.7
Animal Sciences	568	0	568	.5
Biochemistry	461	149	610	.6
Botany & Plant Pathology	422	0	422	.4
Entomology	404	29	433	.4
Forestry & Natural Resources	1,556	0	1,556	1.5
Horticulture	775	54	829	.8
Total	8,359	233	8,592	8.2
Engineering-Administration	94	0	94	.1
Aero and Astro Engrg.	1,121	0	1,121	1.1
Chemical Engrg.	1,086	33	1,119	1.1
Civil Engrg.	2,212	0	2,212	2.1
Electrical Engrg.	2,393	27	2,420	2.3
Freshman Engrg.	1,230	0	1,230	1.2
Industrial Engrg.	854	0	854	.8
Mechanical Engrg.	1,976	13	1,989	1.9
Materials Science Engrg.	297	25	322	.3
Nuclear Engrg.	483	3	486	.5
Interdisciplinary Engrg.	462	0	462	.4
Total	12,208	101	12,309	11.8
Home Economics-Administration	2,245	0	2,245	2.2
Clothing and Textiles	1,503	0	1,503	1.4
Housing, Equipment and Environment	947	0	947	.9
Foods & Nutrition	1,419	0	1,419	1.4
Home Management and Family Economics	462	1	463	.4
Restaurant & Hotel Manage- ment	428	0	428	.4
Child Development and Family Life	1,009	0	1,009	1.0
Total	8,013	1	8,014	7.7

^a Includes photocopied items.

Table 4.2

Research Development Unit
Circulation Study
Loans to Faculty and Students
By School and Department

<u>School/Department</u>	<u>Number of loans</u>	<u>Number of items photocopied</u>	<u>Total loans^a</u>	<u>% of total</u>
HSSE-Administration	1,082	0	1,082	1.0
Creative Arts	2,444	0	2,444	2.3
Audiology & Speech Sciences	1,136	0	1,136	1.1
Education	5,363	0	5,363	5.1
English	4,641	0	4,641	4.4
General Studies	21	0	21	*
History	2,676	0	2,676	2.6
Foreign Language and Literature	3,046	0	3,046	2.9
Philosophy	690	0	690	.7
Physical Education-Men	970	0	970	.9
Physical Education-Women	828	0	828	.8
Political Science	2,770	0	2,770	2.7
Psychological Science	4,041	0	4,041	3.9
Sociology and Anthropology	2,209	0	2,209	2.1
Communication	2,583	0	2,583	2.5
American Studies	17	0	17	*
Total	34,517	0	34,517	33.0
Industrial Administration	5,584	9	5,593	5.3
Pharmacy-Administration	458	115	573	.5
Bionucleonics	357	50	407	.4
Medicinal Chemistry and Pharmacognosy	270	248	518	.5
Pharmacology and Toxicology	237	46	283	.3
Clinical Pharmacy	64	42	106	.1
Industrial and Physical Pharmacy	192	130	322	.3
Total	1,578	631	2,209	2.1
Science-Administration	740	0	740	.7
Biological Sciences	3,476	34	3,510	3.3
Chemistry	2,789	2,410	5,199	5.0
Mathematical Sciences	2,691	52	2,743	2.6
Physics	1,547	20	1,567	1.5
Geosciences	1,012	4	1,016	1.0
Computer Sciences	999	12	1,011	1.0
Statistics	497	0	497	.5
Total	13,751	2,532	16,283	15.6

^a Includes photocopied items.

*Less than .1%

Table 4.3

Research Development Unit
Circulation Study
Loans to Faculty and Students
By School and Department

<u>School/Department</u>	<u>Number of loans</u>	<u>Number of items photocopied</u>	<u>Total loans^a</u>	<u>% of total</u>
Veterinary Medicine- Administration	414	15	429	.4
Veterinary Anatomy	88	1	89	.1
Veterinary, Microbiology, Pathology & Public Health	220	33	253	.2
Veterinary Physiology and Pharmacology	28	1	29	*
Animal Clinics	53	0	53	.1
Total	803	50	853	.8
Aviation Technology	475	0	475	.5
Construction Technology	105	0	105	.1
Electrical Technology	230	0	230	.2
Industrial Education	654	0	654	.6
Manufacturing Technology	327	0	327	.3
Nursing	786	0	786	.7
Supervision Technology	154	0	154	.2
Total	2,731	0	2,731	2.6
Subtotal	87,544	3,557	91,101	87.1
Other: Purdue	5,164	239	5,403	5.2
Interlibrary Loan and Other	7,532	565	8,097	7.7
Total	100,240	4,361	104,601	100.0

^a Includes photocopied items.

*Less than .1%

Table 5.1
Research Development Unit
Circulation Study
Distribution of Loans to Faculty and Students
By School and Department⁽¹⁾

School/Department	Faculty		Graduate Students		Undergraduates	
	Number of loans	% of total	Number of loans	% of total	Number of loans	% of total
Agriculture-Administration	19	.2	53	.1	2,100	4.9
Agricultural Economics	349	3.4	635	1.7	191	.4
Agricultural Engrg.	17	.2	55	.2	59	.1
Agrology	78	.8	492	1.3	126	.3
Animal Sciences	87	.8	173	.5	308	.7
Biochemistry	231	2.2	262	.7	117	.3
Botany & Plant Pathology	100	1.2	206	.7	46	.1
Entomology	105	1.0	155	.4	173	.4
Forestry & Natural Resources	131	1.3	190	.5	1,235	2.9
Horticulture	125	1.2	131	.3	573	1.3
Total	1,262	12.3	2,402	6.4	4,928	11.4
Engineering-Administration	93	.9	1	*	0	0
Aero and Astro. Engrg.	175	1.7	526	1.4	420	1.0
Chemical Engrg.	135	1.3	690	1.9	286	.7
Civil Engrg.	277	2.5	1,201	3.2	754	1.7
Electrical Engrg.	360	3.5	1,349	3.6	711	1.6
Freshman Engrg.	11	.1	0	0	1,119	2.8
Industrial Engrg.	77	.8	466	1.2	311	.7
Mechanical Engrg.	247	2.4	979	2.6	763	1.8
Materials Science Engrg.	65	.6	148	.4	109	.3
Nuclear Engrg.	31	.3	419	1.1	0	0
Interdisciplinary Engrg.	5	*	2	*	491	1.4
Total	1,456	14.1	5,789	15.4	5,064	11.7
Home Economics-Administration	6	*	1	*	2,238	5.2
Clothing and Textiles	37	.4	272	.7	1,194	2.8
Housing, Equipment & Environment	41	.4	210	.6	696	1.6
Food and Nutrition	70	.7	371	1.0	978	2.3
Home Management and Family Economics	24	.2	203	.5	236	.5
Restaurant and Hotel Management	11	.1	132	.3	285	.7
Child Development and Family Life	36	.4	973	2.6	0	0
Total	225	2.2	2,162	5.7	5,627	13.1
HSGE-Administration	22	.2	0	0	1,060	2.5
Creative Arts	237	2.3	513	1.4	1,694	3.9
Audiology & Speech Sciences	120	1.2	374	1.0	642	1.5
Education	345	3.4	3,063	8.2	1,935	4.5
English	821	8.0	2,726	7.2	1,094	2.5
General Studies	17	.1	4	*	0	0
History	372	3.6	906	2.4	1,396	3.2
Foreign Language and Literature	657	6.4	1,607	4.3	782	1.8
Philosophy	176	1.7	266	.8	228	.5
Physical Education-Men	2	*	114	.3	854	2.0
Physical Education-Women	15	.1	47	.1	766	1.8
Political Science	180	1.7	1,433	3.8	1,157	2.7
Psychological Science	145	1.4	2,228	5.9	1,568	3.6
Sociology and Anthropology	247	2.4	948	2.5	1,014	2.4
Communication	59	.6	1,000	2.7	1,504	3.5
American Studies	17	.2	0	0	0	0
Total	3,532	34.3	15,269	40.6	15,696	36.4

(1) Includes photocopies
*Less than .14

Table 5.2
Research Development Unit
Circulation Study
Distribution of Loans to Faculty and Students
By School and Department (1)

School/Department	Faculty		Graduate Students		Undergraduates	
	Number of loans	% of total	Number of loans	% of total	Number of loans	% of total
Industrial Management	371	3.6	2,114	5.6	3,108	7.2
Pharmacy-Administration	70	.7	57	.2	578	1.3
Bionucleonics	48	.5	336	.9	0	0
Medicinal Chemistry and Pharmacognosy	113	1.1	310	.8	0	0
Pharmacology and Toxicology	80	.8	203	.5	0	0
Clinical Pharmacy	38	.3	68	.2	0	0
Industrial and Physical Pharmacy	54	.5	254	.7	0	0
Total	403	3.9	1,228	3.3	578	1.3
Science-Administration	0	0	0	0	740	1.7
Biological Sciences	290	2.8	1,155	3.0	2,065	4.8
Chemistry	1,012	9.8	3,530	9.4	657	1.5
Mathematical Sciences	731	7.1	893	2.4	1,119	2.6
Physics	215	2.1	901	2.4	451	1.0
Geosciences	240	2.4	444	1.2	332	.8
Computer Sciences	114	1.1	315	.8	582	1.4
Statistics	72	.7	409	1.1	16	*
Total	2,674	26.0	7,647	20.3	5,962	13.8
Veterinary Medicine-Administration	18	.2	411	1.1	0	0
Veterinary Anatomy	56	.6	33	.1	0	0
Veterinary, Microbiology, Pathology & Public Health	116	1.1	137	.4	0	0
Veterinary Physiology and Pharmacology	24	.2	5	*	0	0
Animal Clinics	43	.4	10	*	0	0
Total	257	2.5	596	1.6	0	0
Aviation Technology	32	.3	0	0	443	1.0
Construction Technology	0	0	0	0	105	.3
Electrical Technology	4	*	0	0	226	.5
Industrial Education	39	.4	420	1.1	195	.5
Manufacturing Technology	21	.2	0	0	306	.7
Nursing	12	.1	0	0	774	1.8
Supervision Technology	7	.1	0	0	147	.3
Total	115	1.1	420	1.1	2,196	5.1
Totals	10,295	100.0	37,647	100.0	43,155	100.0

(1) Includes photocopies
*Less than .1%

Table 5A.1

Research Development Unit
Circulation Study
Distribution of Purdue
Population Groups and Library Loans⁽¹⁾

School/Department	Faculty ⁽²⁾		Graduate Students		Undergraduates	
	% Popu- lation	% loans	% Popu- lation	% loans	% Popu- lation	% loans
Agriculture-Administration	.7	.2	0	.1	7.8	4.9
Agricultural Economics	2.7	3.4	1.6	1.7	1.1	.4
Agricultural Engrg.	1.3	.2	.5	.2	.2	.1
Agronomy	3.0	.8	1.9	1.3	.6	.3
Animal Sciences	3.1	.8	1.3	.5	1.6	.7
Biochemistry	2.0	2.2	1.0	.7	.3	.3
Botany & Plant Pathology	1.9	1.2	.8	.7	.1	.1
Entomology	1.8	1.0	.7	.4	.2	.4
Forestry & Natural Resources	1.6	1.3	.9	.5	1.8	2.9
Horticulture	1.8	1.2	.5	.3	1.3	1.3
Total	19.9	12.3	9.5 ⁽³⁾	6.4	15.0	11.4
Engineering-Administration	.4	.9	0	*	.3	0
Aero and Astro Engrg.	1.6	1.7	1.5	1.4	1.1	1.0
Chemical Engrg.	1.1	1.3	1.4	1.9	1.2	.7
Civil Engrg.	3.5	2.5	4.1	3.2	2.2	1.7
Electrical Engrg.	3.1	3.5	4.7	3.6	2.9	1.6
Freshman Engrg.	.6	.1	0	0	6.6	2.8
Industrial Engrg.	1.2	.8	1.6	1.2	1.1	.7
Mechanical Engrg.	3.3	2.4	3.4	2.6	3.0	1.8
Materials Science Engrg.	.7	.6	.5	.4	.2	.3
Nuclear Engrg.	.6	.3	1.0	1.1	0	0
Interdisciplinary Engrg.	*	*	*	*	1.3	1.4
Total	16.1	14.1	18.2	15.4	19.9	11.7
Home Economics-Administration	.4	*	0	*	1.7	5.2
Clothing and Textiles	.6	.4	.4	.7	1.4	2.8
Housing, Equipment & Environment	.5	.4	.4	.6	1.5	1.6
Foods and Nutrition	.7	.7	1.0	1.0	1.3	2.3
Home Management & Family Economics	.4	.2	.6	.6	.3	.5
Restaurant & Hotel Management	.4	.1	.3	.3	.7	.7
Child Development and Family Life	.8	.4	1.6	2.6	1.0	0
Total	3.8	2.2	4.4	5.7	7.9	13.1
HSSE-Administration	.4	.2	0	0	.2	2.5
Creative Arts	2.2	2.3	1.6	1.4	1.9	3.9
Audiology & Speech Sciences	1.5	1.2	1.7	1.0	1.5	1.5
Education	3.3	3.4	17.1	8.2	3.9	4.5
English	3.7	8.0	3.5	7.2	.9	2.5
General Studies	0	.1	0	*	1.9	0
History	1.6	3.6	.7	2.4	.5	3.2
Foreign Language and Literature	2.4	6.4	1.3	4.3	.8	1.3
Philosophy	1.1	1.7	.6	.8	.1	.5
Physical Education-Men	.7	*	1.2	.3	1.7	2.0
Physical Education-Women	.9	.1	.1	.1	.6	1.8
Political Science	1.3	1.7	1.2	3.8	1.2	2.7
Psychological Science	2.7	2.4	4.4	5.9	1.7	3.6
Sociology and Anthropology	1.9	2.4	1.4	2.5	1.0	2.4
Communication	1.3	.6	1.9	2.7	1.8	3.5
American Studies	0	.2	0	0	0	0
Total	25.0	34.3	36.7	40.6	19.7	36.4

(1) Includes photocopied items and population based on data supplied by the Registrar's Office and the Personnel Office.

(2) Teaching faculty only.

(3) 14 students (.3%) in Agricultural Extension Education included in total.

*Less than .1%

Table 5A.2
Research Development Unit
Circulation Study
Distribution of Purdue
Population Groups and Library Loans⁽¹⁾

School/Department	Faculty ⁽²⁾		Graduate Students		Undergraduates	
	% Popu- lation	% loans	% Popu- lation	% loans	% Popu- lation	% loans
Industrial Management	3.7	3.6	7.6	5.6	11.1	7.2
Pharmacy-Administration	.2	.7	0	.2	3.3	1.3
Bionucleonics	.6	.5	1.0	.9	0	0
Medicinal Chemistry and Pharmacognosy	1.0	1.1	.5	.8	0	0
Pharmacology and Toxicology	.6	.8	.4	.5	0	0
Clinical Pharmacy	.8	.3	.3	.2	0	0
Industrial and Physical Pharmacy	.5	.5	.6	.7	0	0
Total	3.7	3.9	2.8	3.3	3.3	1.3
Science-Administration	.2	0	0	0	2.2	1.7
Biological Sciences	3.4	2.8	3.2	3.0	5.3	4.8
Chemistry	4.2	9.8	5.6	9.4	1.1	1.5
Mathematical Sciences	3.7	7.1	2.4	2.4	2.1	2.6
Physics	3.8	2.1	2.7	2.4	.6	1.0
Geosciences	1.3	2.4	1.4	1.2	.8	.8
Computer Sciences	1.1	1.1	2.3	.8	1.4	1.4
Statistics	.9	.7	1.1	1.1	*	*
Total	18.6	26.0	18.7	20.3	13.5	13.8
Veterinary Medicine- Administration	.4	.2	.3	1.1	1.3	0
Veterinary Anatomy	.5	.6	.2	.1	0	0
Veterinary, Microbiology, Pathology & Public Health	.8	1.1	.5	.4	0	0
Veterinary Physiology and Pharmacology	.3	.2	.1	*	0	0
Animal Clinics	1.4	.4	.1	*	0	0
Total	3.4	2.5	1.2	1.6	1.3	0
Technology-Administration	1.3	.3	0	0	1.1	1.0
Aviation Technology	.2	0	0	0	1.0	.3
Construction Technology	.8	*	0	0	1.4	.5
Electrical Technology	.7	.4	.9	1.1	.5	.5
Industrial Education	.9	.2	0	0	1.3	.7
Manufacturing Technology	1.5	.1	0	0	2.1	1.8
Nursing	.3	.1	0	0	.9	.3
Supervision Technology	.2	0	0	0	0	0
Total	5.8	1.1	.9	1.1	8.3	5.1
Totals	100.0	100.0	100.0	100.0	100.0	100.0

(1) Includes photocopied items and population based on data supplied by the Registrar's Office and the Personnel Office.

(2) Teaching faculty only.

*Less than .1%

Table 6.1
Research Development Unit
Circulation Study
Loans Per Capita by Level,
Department, and School⁽¹⁾

School/Department	Faculty ⁽²⁾		Graduate Students		Undergraduates	
	Popu- lation	Per Capita loans	Popu- lation	Per Capita loans	Popu- lation	Per Capita loans
Agriculture-Administration	14	1.4	0	0	1,571	1.3
Agricultural Economics	54	6.5	77	8.2	222	.9
Agricultural Engrg.	25	.7	26	2.1	45	1.3
Agronomy	60	1.3	92	5.3	115	1.1
Animal Sciences	61	1.4	64	2.7	315	1.0
Biochemistry	39	5.9	51	5.1	63	1.9
Botany & Plant Pathology	37	3.2	38	6.7	21	2.2
Entomology	36	2.9	31	5.0	40	4.3
Forestry & Natural Resources	30	4.1	46	4.1	370	3.3
Horticulture	36	3.5	24	5.5	269	2.1
Total	394	3.2	463(3)	5.2(4)	3,051	1.6
Engineering-Administration	8	11.6	0	0	55	0
Aero and Astro Engrg.	32	5.2	76	6.9	212	2.0
Chemical Engrg.	22	6.1	68	10.3	252	1.1
Civil Engrg.	69	3.7	201	6.0	454	1.7
Electrical Engrg.	62	5.8	222	6.0	596	1.2
Freshman Engrg.	12	.9	0	0	1,327	.9
Industrial Engrg.	23	3.3	79	5.9	200	1.4
Mechanical Engrg.	65	3.8	169	5.8	607	1.3
Materials Science Engrg.	14	4.6	23	6.4	44	2.5
Nuclear Engrg.	11	2.8	47	8.9	0	0
Interdisciplinary Engrg.	1	5.0	1	2.0	265	1.9
Total	319	4.6	890	6.5(5)	4,042	1.3
Home Economics-Administration	8	.8	0	0	348	6.4
Clothing and Textiles	13	2.8	21	13.0	293	4.1
Housing, Equipment, and Environment	10	4.1	18	11.7	294	2.4
Foods and Nutrition	14	5.0	21	7.3	770	3.7
Home Management and Family Economics	8	3.0	29	7.0	59	4.0
Restaurant and Hotel Management	7	1.6	17	7.8	139	2.1
Child Development and Family Life	16	2.3	80	12.2	195	0
Total	76	3.0	216	10.0(5)	1,598	3.5

- (1) Per Capita figures are based on head count data supplied by the Registrar's Office and the Personnel Office.
 (2) Teaching faculty only.
 (3) 14 additional students in Extension Education added to total only.
 (4) 53 loans made to graduate students in Agriculture-Administration included in per capita total only.
 (5) 1 loan made to graduate students in Engineering-Administration and Home Economics-Administration included in per capita total only.

Table 6.2
Research Development Unit
Circulation Study
Loans Per Capita by Level,
Department, and School⁽¹⁾

School/Department	Faculty ⁽²⁾		Graduate Students		Undergraduates	
	Popu- lation	Per Capita Loans	Popu- lation	Per Capita Loans	Popu- lation	Per Capita Loans
MSW-Administration	8	2.8	0	0	40	26.5
Creative Arts	44	5.4	76	6.8	394	4.3
Audioology & Speech Sciences	19	4.1	84	4.5	304	2.1
Education	65	5.3	838	3.7	797	2.4
English	73	11.2	172	15.8	189	5.8
General Studies	0	0	0	0	377	0
History	32	11.6	33	27.5	105	13.3
Foreign Language and Literature	48	13.7	62	25.9	162	4.8
Philosophy	21	8.4	27	10.6	29	7.9
Physical Education-Men	15	.1	61	1.9	340	2.4
Physical Education-Women	17	.9	5	9.4	111	6.9
Political Science	25	7.7	60	23.9	241	4.8
Psychological Science	54	4.5	214	10.4	348	4.5
Sociology and Anthropology	37	6.7	71	13.4	210	4.8
Communication	26	2.3	92	11.1	350	4.3
American Studies	0	0	0	0	0	0
Total	494	7.1(6)	1,795	8.5(7)	4,007	3.9
Industrial Administration	73	9.1	371	5.7	2,245	1.4
Pharmacy-Administration	3	23.3	0	0	659	.9
Bionucleonics	13	3.7	51	6.6	0	0
Medicinal Chemistry and Pharmacognosy	19	5.9	23	13.5	0	0
Pharmacy and Toxicology	13	6.2	21	9.7	0	0
Clinical Pharmacy	16	2.4	13	5.2	0	0
Industrial and Physical Pharmacy	9	6.0	29	8.8	0	0
Total	73	5.5	137	9.0(8)	659	.9
Science-Administration	4	0	0	0	440	1.7
Biological Sciences	67	4.3	156	0	1,070	1.9
Chemistry	80	12.3	273	4.2	216	3.0
Mathematical Sciences	73	10.0	119	29.7	423	2.6
Physics	76	2.8	134	6.7	114	4.0
Geosciences	25	9.6	68	13.3	155	2.1
Computer Sciences	22	5.2	111	4.0	295	2.0
Statistics	18	4.0	52	6.0	15	1.1
Total	367	7.3	913	8.4	2,728	2.2
Veterinary Medicine- Administration	8	2.3	15	27.4	274	0
Veterinary Anatomy	10	5.6	10	3.3	0	0
Veterinary Microbiology, Pathology & Public Health	15	7.7	26	5.3	0	0
Veterinary Physiology and Pharmacology	7	3.4	6	.8	0	0
Animal Clinics	27	1.6	3	3.3	0	0
Total	67	3.8	60	9.9	274	0
Aviation Technology	26	1.2	0	0	223	2.0
Construction Technology	3	0	0	0	198	.5
Electrical Technology	16	.3	0	0	284	.8
Industrial Education	13	3.0	44	9.5	95	2.1
Manufacturing Technology	17	1.2	0	0	265	1.2
Nursing	30	.4	0	0	426	1.8
Supervision Technology	6	1.2	0	0	195	.8
Technology Administration	4	0	0	0	0	0
Total	115	1.0	44	9.5	1,686	1.3
Totals	1,978	5.2	4,891	7.7	20,270	2.1

- (1) Per Capita figures are based on head count data supplied by the Registrar's Office and the Personnel Office.
 (2) Teaching faculty only.
 (6) No faculty in General Studies or American Studies, 34 loans and 17 loans respectively, included in the per capita total only.
 (7) 4 loans to graduate students in General Studies included in per capita total only.
 (8) 7 loans to graduate students in Pharmacy-Administration included in per capita total only.